

Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) from the Indo- Australian transition zone, with remarks on some Oriental and Australian taxa

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Abstract: Species of *Sapintus* Casey, 1895 from Wallacea and the Papuan region were revised. Thirty one species confirmed for the study area. Ten species new to science are described and illustrated, namely *Sapintus* (s. str.) *airi* sp. nov. (Solomon Islands), *S.* (s. str.) *celeripes* sp. nov. (W New Guinea), *S.* (s. str.) *curvitibia* sp. nov. (Solomon Islands), *S.* (s. str.) *densepunctatus* sp. nov. (W New Guinea), *S.* (s. str.) *geminus* sp. nov. (Papua New Guinea), *S.* (s. str.) *gemitus* sp. nov. (Sulawesi), *S.* (s. str.) *macrops* sp. nov. (W New Guinea), *S.* (s. str.) *malut* sp. nov. (North Moluccas), *S.* (s. str.) *monstrosiantennatus* sp. nov. (Sulawesi), and *S.* (s. str.) *sexualis* sp. nov. (W New Guinea). Redescriptions of another 21 species are given. Thirteen new combinations and 12 new synonymy are proposed. One revised status and two new names are proposed. Seven lectotype designations are made. An identification keys to species of *Sapintus* Casey, 1895 of the study area and an annotated species list are presented. Biogeographical peculiarities of *Sapintus* Casey, 1895 in the Indo-Australian transition zone are discussed for the first time. Ecological and bionomical observations are analysed. Possible mimicry cases among *Sapintus* and other beetle families (Cleridae, Chrysomelidae) were discussed. Additionally, eight species new to science from the Oriental region are described and illustrated, namely *S. andreaskopetzi* sp. nov. (Nepal), *S. angulapex* sp. nov. (The Philippines: Palawan), *S. curvatus* sp. nov. (Thailand), *S. echinatus* sp. nov. (Indonesian Borneo), *S. gracilentus* sp. nov. (Vietnam), *S. hartmanni* sp. nov. (Nepal), *S. lao* sp. nov. (Laos), and *S. vietnamensis* sp. nov. (Vietnam).

Key words: Coleoptera, Anthicidae, Anthicinae, *Sapintus*, Wallacea, Papuan region, Sulawesi, the Moluccas, Raja Ampat, New Guinea, Solomon Islands, biodiversity, taxonomy, biogeography, new species, identification key, mimicry, adaptive colouration, checklist.

Introduction

Almost all the main groups of the Anthicidae from the Indo-Australian transition zone have been revised during the last eight years (Telnov 2006a, 2007a & b, 2011a & b, 2012); the genus *Sapintus* Casey is the only remaining species-rich group not to have been subjected to taxonomic-biogeographical revision. *Sapintus* Casey, 1895 is a diverse and large genus of Anthicini (Anthicinae) with cosmopolitan distribution and over 175 recent species worldwide (no fossil records are hitherto known for this genus). Tropical areas of Oriental and Afrotropical chorons are where most of *Sapintus* species were recorded. Nearctic, Neotropical and Australian faunas seem less diverse (or have been researched less), but they still host several dozens of *Sapintus* species each. One subgenus is defined within this genus – *Barbigerosapintus* Telnov, 1998, which is distributed throughout tropical Asia

as far as the Philippines, but not reaching the Indo-Australian transition zone.

Species of *Sapintus* demonstrate general uniformity in external morphology and body colouration. About 2/3 of all *Sapintus* species were originally described by Maurice Pic. As most entomologists know, these descriptions and his diagnoses of new taxa too insufficient and contain no information or figures about the genital organs which are an essential characteristic in defining new taxa. Large number of Pic's types stored at the MNHN have for a long time remained unattainable to anthicidologists; some of these types are now missing (destroyed or lost). Many of older descriptions could easily apply to several species at least. All the aforementioned facts were a cause for common confusions made by earlier authors – numerous synonyms have been established and only few specimens of *Sapintus* have been identified correctly subsequent to the original descriptions of



these species.

Very few successful examples of taxonomical revisions of *Sapintus* species are known. Bonadona (1958) presented a good review of Madagascan species. Werner (1962, 1983) successfully revised Nearctic and Neotropical species and also noted the importance of male genitalia for proper identification of specimens. Werner and Chandler (1995) did good work on New Zealand fauna of Anthicidae. On the other hand, an attempt by Uhmman in 2007 to compile Anthicidae fauna of Australia was unsuccessful and made little sense since this author did not study type material of most of Australian species, and also failed to consider genital organs for treating species (Telnov 2011b).

In this publication I follow the concept by Bonadona (1958) who broaden the definition of *Sapintus* compared to Werner (1962, 1983). The present study aims to describe results of long-term taxonomically-faunistic and ecological investigation on the genus *Sapintus* in the Indo-Australian biogeographical transition zone - the Wallacea, New Guinea and the Solomon Islands, as well as to give preliminary biogeographical analysis of all species. In total, there are 31 species confirmed for the study area. Six informal species-groups are established. Descriptions of 10 new species are given. 13 new combinations are proposed, seven lectotypes are designated. Original identification key to species of *Sapintus* in the study area as well as an annotated checklist are presented. Available ecological data are summarized. For some reason, redescriptions and descriptions of some Oriental species of *Sapintus* are also given.

Generally, *Sapintus* s. str. is large and quite uniform group of the Anthicidae especially diverse in Oriental and Afrotropical chorons. Many species are very insufficiently described and are now hardly recognizable.

Material and methods

Over 400 specimens of *Sapintus* from the Indo-Australian transition zone and adjacent areas were morphologically and anatomically studied. Type specimens of all previously known species and subspecific taxa of *Sapintus* from Australia, Indonesia, Malaysia, Micronesian islands, New Caledonia, Papua New Guinea, and the Philippines were investigated (except for the two most common species, *S. plectilis* (Pic) and *S. oceanicus* (LaFerté-Sénéctère)). The material studied come from various scientific collections across Europe, U.S.A., Asia and

Australia. A significant part of the material has been collected by the author during several expeditions to remote parts of the Moluccas, Raja Ampat Islands and New Guinea. The specimens under study are all mounted on paper slides. In average, over 60% of all examples were dissected and their genital organs were investigated. Within large series of specimens, merely random dissection has been performed. Genital organs were mounted on microscopic slides and fixed in Apáthy's gum-syrup to make the objects permanent. For morphological studies, a Leica S6D binocular stereomicroscope with attached external Canon EOS 450D SLR camera was used. Genital organs were studied and photographed using a Meji optical microscope with attached external digital camera for imaging.

Acronyms for scientific collections:

- BMNH – The Natural History Museum (British Museum, Natural History), London, U.K.;
- HMNH – Hungarian National Museum of Natural History, Budapest, Hungary;
- IRSN – Institut royal des Sciences naturelles de Belgique, Brussel, Belgium;
- MNHN – Muséum National d'histoire naturelle, Paris, France;
- MSNG – Museo Civico di Storia Naturale 'Giacomo Doria', Genova, Italy;
- NHMW – Naturhistorisches Museum Wien, Austria;
- MHUB – Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany;
- NHMB – Naturhistorisches Museum Basel, Switzerland;
- NHRS – Naturhistoriska Riksmuseet, Stockholm, Sweden;
- NME – Naturkundemuseum Erfurt, Germany (here also specimens collected by A.Skale & A.Weigel does belong);
- NMNZ – Museum of New Zealand, Wellington, New Zealand;
- OUNH – Oxford University Museum of Natural History, U.K.;
- RMNH – Nationaal natuurhistorisch Museum (Naturalis), Leiden, The Netherlands;
- SDEI – Senckenberg Deutsches Entomologisches Institut, Eberswalde, Germany;
- SMNS – Staatliches Museum für Naturkunde Stuttgart, Germany;
- ZIN – Zoological Institute, Russian Academy of Sciences, St.-Petersburg, Russia;
- ZMUC – Zoological Museum, University of Copenhagen, Denmark;
- ZSM – Zoologische Staatssammlung München, Germany;



DCC – Collection Donald S. Chandler, Durham, U.S.A.;
DTC – Collection Dmitry Telnov, Rīga, Latvia;
PAC – Collection Paul Aston, Hong Kong, China;
SKC – Collection Sergey Kurbatov, Moscow, Russia.

The study area (Map 1) extends over a large territory of ~4.800 km from Sulawesi and Lombok on the West to the Solomon Islands on the East. The study area further included the following insular systems and large islands: the classic Wallacea (inclusive Sulawesi, the Moluccas, Lesser Sunda Islands, Timor, Tanimbar Islands, Banda Islands and Kei Islands), Raja Ampat Islands (inclusive Batanta, Kofiau, Misool, Salawati and Waigeo), New Guinea with satellite islands (Aru Islands, Cenderawasih Bay islands of Biak, Numfor and Yapen, Bismarck and Admiralty archipelagos, as well as Louisiade Archipelago and D'Entrecasteaux Islands), and the Solomon Islands. Species of *Sapintus* from adjacent territories as for example Greater Sunda Islands, Peninsular Malaysia, the Philippines, Australia, New Caledonia and Micronesia (further mentioned as 'neighbouring areas') were also studied and revised. Taxonomic & biogeographical data of *Sapintus* from these neighbouring areas will be the subject of further publications.

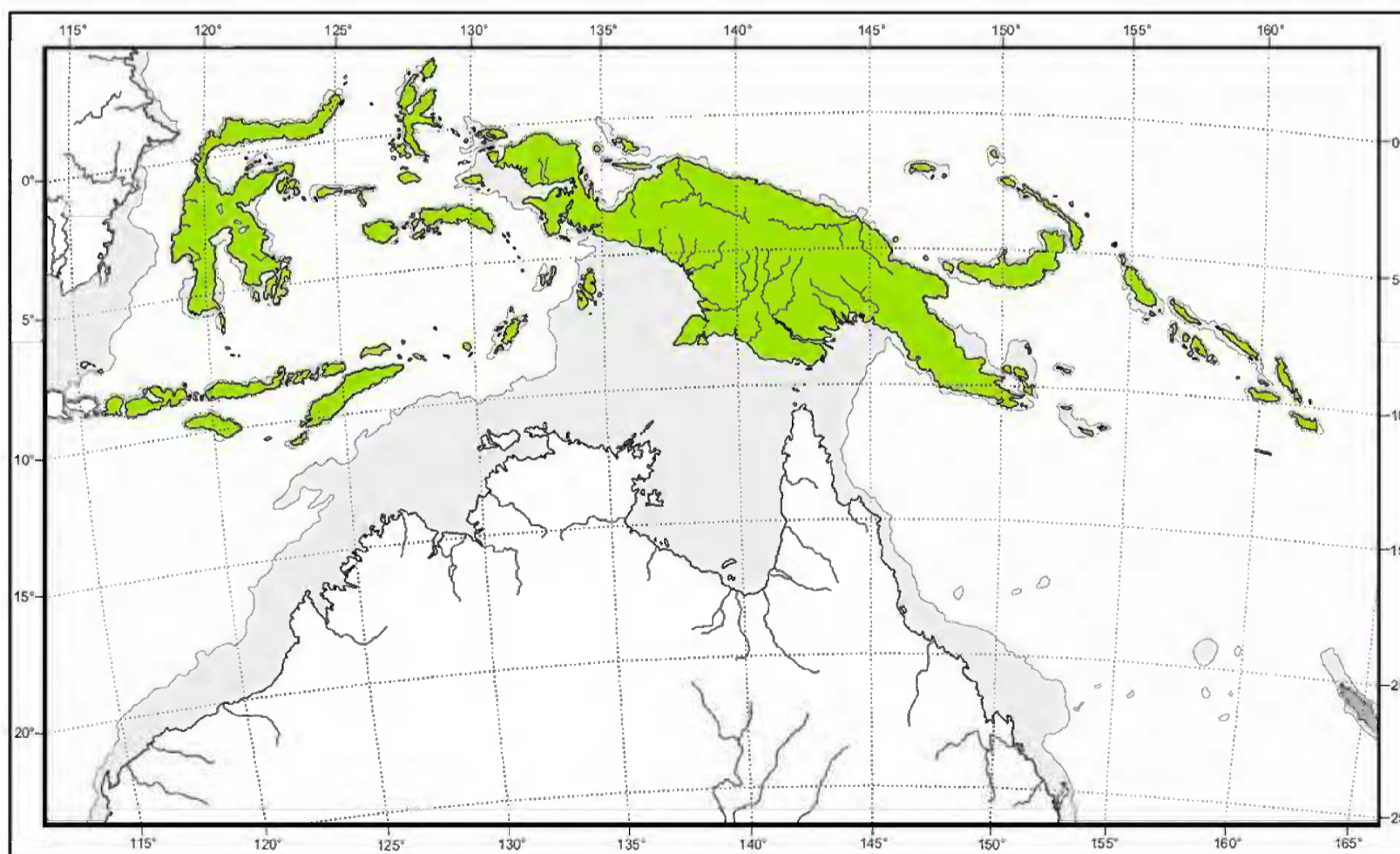
For more convenient use and because a phylogenetic arrangement is not yet possible, all species-groups and species are listed alphabetically. All label text is reproduced exactly,

with no corrections or additions. All labels are printed unless otherwise stated. The author's comments are placed in square brackets []. Already published localities referred to are given in quotation marks; the corresponding reference always follows the quote. If not stated otherwise, all examples mentioned in this publication can be proved by the author. All type specimens of new species described in the present publication are provided with an additional black-bordered label printed in red 'Holotypus' or 'Paratypus'. Consequently, lecto- and paralectotype specimens designated below are provided with the additional labels 'Lectotypus' or 'Paralectotypus'.

Last visible ventrites (last fully exposed terminal tergite and sternite) discussed by each species' description are the morphological sternite & tergite VII. The omoplates and postbasal transverse impression of the elytra are usually not mentioned if they are vague indicated as is typical for this genus.

Historical overview

The genus *Sapintus* was first proposed by Casey in 1895 for ten Nearctic species. A type species was not been originally proposed but was later designated by Werner (1962). For a long time *Sapintus* was considered an element of the



Map 1. Study area is shaded dark grey; Sahul shelf and Sunda shelf are shaded light grey (from Telnov 2011).



American fauna until Bonadona (1958) expanded the generic definition by Casey, included numerous Afrotropical and Oriental species in it and suggested a possible Gondwanan origin of *Sapintus*. Subsequently over 150 species have been included or described in *Sapintus* by numerous authors, mostly split in short separate papers.

The taxonomically-faunistic (zoological) exploration of *Sapintus* in the Indo-Australian transition zone has been recorded continuously for a long time. But these efforts are poorly differentiated and mostly represented by original descriptions and only a few faunistic publications, as well as one single outdated checklist.

Almost all previously published descriptions of *Sapintus* species from the study area are based on material collected by few zoological and zoogeographical expeditions. These expeditions are chronographically listed below:

Expeditions by Alfred Russel Wallace and his assistant Charles Allen 1856-61 visited Sulawesi, the Moluccas, and Raja Ampat Islands, Aru and Kei islands, as well as coastal areas of Bird's Head Peninsula of New Guinea. Wallace's material, usually very comprehensive on various groups of Coleoptera, does not include a single specimen of *Sapintus*. However his expeditions are of such great importance that it is worth mentioning them.

Luigi Maria d'Albertis 1871-78 carried out several expeditions to the northern Bird's Head Peninsula and to the southern lowlands, and also went up the Fly River (Capocaccia, Poggi 1982).

Lamberto Loria collected material in eastern parts of New Guinea 1889-94. He visited Papuan Peninsula, Milne Bay islands, as well as coastal territories of Astrolabe Bay and Gulf of Papua (Capocaccia, Poggi 1982).

Lajos Biró travelled along the coast of German New Guinea 1896-1904 and successfully collected several species of *Sapintus*.

J.O. Bürgers 1912-13 was a doctor and also zoological collector of the 'Kaiserin-Augusta-Fluß Expedition'. During this important expedition, the valley of River Sepik and its tributaries were explored both geographically and zoologically.

Bernhard C.E. Rensch was one of only a few invertebrate specialists who visited Lesser Sunda Islands with the zoological expedition in 1927. Amongst the copious material collected on Sumbawa Island there were also few specimens of *Sapintus*.

Expedition 'Noona Dan' performed by the Zoological Museum University of Copenhagen (Denmark) 1961-1962. The only zoological expedition visited Bismarck

Archipelago and collected *Sapintus* specimens.

Important material was collected on the Solomon Islands by entomologists and naturalists Penelope Jean Macleod Greenslade and Philip John Marsh Greenslade (both actively collected material on the Solomon Islands in 1960-70), also Peter Nolan Lawrence (participant of the Royal Society Solomon Islands Expedition) and in Papua New Guinea by Mick E. Bacchus. Very rich Anthicidae material is also available from two long-term international projects - 'Project Wallace' of the BMNH in northern Sulawesi (Bogani Nani Wartabone National park) and 'Canopy Mission' of the IRSN in Madang province of Papua New Guinea. A lot of new and interesting ecological data was collected during these two projects, employing different collecting techniques.

The first species nowadays known as *Sapintus* from the Indo-Australian transition zone was described from Sumbawa by Maurice Pic (1895). Later, he (Pic 1900) followed with 12 Papuan taxa described from the collection of MSNG in Genova (L. Loria's and L.M. d'Albertis's collected specimens) and two years later three new Papuan taxa collected by L. Biró were added (Pic 1902). All these taxa were originally placed in *Anthicus* Paykull, the largest and highly diverse genus of Anthicidae. Pic (1911) also published a single hitherto outdated catalogue of worldwide anthicids including the (at that time) known taxa from the Indo-Australian transition zone, i.e. 15 species with two subspecies. Bonadona (1981) described three new species from Bismarck Archipelago from material collected by 'Noona Dan' expedition. Uhmann (1995a) added one more Papuan species. Werner's (1965) account and key to Anthicidae of Micronesia does not overlap with our study area, but is important enough to be mentioned, as some species are shared between two areas; four species of *Sapintus* are described in this publication.

Totally, 17 taxa of *Sapintus* were recorded from the study area prior to the start of the current research.

Systematics

Subfamilia **Anthicinae** Latreille, 1819

Tribus **Anthicini** Latreille, 1819

Genus ***Sapintus*** Casey, 1895: 732

Subgenus ***Sapintus*** sensu stricto Casey, 1895: 732

Type species: *Anthicus pubescens* LaFerté-Sénectère, 1849a: 76, subsequent designation by Werner 1962: 493



Subgenus ***Barbigerosapintus*** Telnov, 1998: 88

Type species: *Sapintus confertopunctatus* Telnov, 1998: 90, original designation by Telnov 1998: 88.

Morphology and anatomy of *Sapintus*

Appearance: Body small, of typical Anthicini shape, 2-5.5 mm long. Dorsal surface (with some exceptions) uniformly black, brown or pale brown, often with yellow or black markings on elytra. Dorsal surface usually densely punctured and covered by numerous suberect to erect setae. Elytra in most species with double pubescence consist from a layer of short appressed undersetae (directed obliquely laterally in most species) arising from tiny punctures and a layer of longer sub- to erect oversetae arising from distinct macropunctures (pores).

Head midsized to large, on base rounded, subtruncate or truncate. Frontoclypeal sulcus present in form of thin line. Eyes small to large, more or less prominent, with clearly visible intrafacetal setae. Maxillary palps with 2nd palpomere elongate, 3rd palpomere shortened and angulated on mesal margin, terminal palpomere oblique apically, widest at middle. Antennae short to long, in certain species with intermediary antennomeres modified – enlarged, angulated or strongly shortened (modifications in males only; if also present in females, than these are usually less distinct). Terminal antennomere usually asymmetrical, longer than or as long as penultimate one.

Pronotum comparatively small, in most species narrower than head, short in New World species, short to elongate in Old World and Australian species, more or less strongly converged laterally toward narrower base (in some species distinctly narrowed posterior to middle, in other species almost as wide on anterior as on basal margin). Pronotal disc flattened to slightly convex. Apical collar always presented. Basal transverse sulcus angled anteriorly at lateral margins.

Elytra elongate, rarely widened on sides. Omoplates and postbasal transverse impression feebly indicated. Sutural striae present, complete or reduced to apical part of elytra. Punctures always confused, but indistinct rows of punctures adjacent to suture extending from scutellum and can reach to apex. Dorsal pubescence (with few exceptions) double and consists of short and dense appressed undersetae (in many species directed obliquely laterally) and longer suberect or erect oversetae. Micropunctures are often very poorly visible even

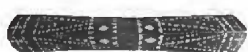
under magnification of 60x.

Underside usually of same colouration like on dorsum. The mesosternum is simple. Lateral margins of mesosternum nearly straight, with a weak lateral curve to middle. Lateral margins of mesepisterna with a fringe of setae covering mesepimera (Plate 63 figs 5-6). Mesepimera atrophied as cavity extending from mesocoxae to subhumeral angle, with a distinct fovea projecting into body cavity as an invagination from mesepimera (Werner, Chandler 1995) (Plate 63 figs 5-6). Basal transverse sulcus of pronotum continued laterally to foveae above procoxae. Notopleural sulcus well defined above coxae, extended or reduced posteriorly. Procoxal cavities open externally, closed internally. Mesocoxal cavities separated by mesosternum. Mesosternum narrowly meets metasternum medially.

First visible sternite (morphological sternite III) of abdomen (Plate 63 fig. 7) with narrow transverse cavities behind each metacoxa obscured by covering fringe of dense whitish setae (Plate 63 fig. 8). Phallobase and tegmen of male genitalia distinct. Tegmen simple to tripartite apically. Penis is shorter than combined length of phallobase and tegmen. Internal sac of male aedeagus may be provided with spines or not, primary gonopore located away from the apex of the sac and forms a large diverticulum in Nearctic and Neotropical species. In East Palaearctic, Afrotropical, Indo-Australian transition zone's and most Oriental species the primary gonopode of male genitalia is terminal on the internal sac. Anatomy of male genitalia almost unknown in Australian *Sapintus*, but species from New Zealand may have both spinose and spine-less internal sac (Werner, Chandler 1995). Male tergite IX with articulate lateroapical arms, T- or Y-shaped. Mesothorax with large mesothoracic glands present at least in some Nearctic, Afrotropical, Oriental & Papuan taxa.

Legs setose, claws simple. Males often with spinose pro- or mesotrochanters. Male tibiae (all of them) can possess recurved apical spines or median spines or denticles. Metatibiae can be modified in males – curved, flattened, spatulate, or covered with long setae. Claws long in all species from the Indo-Australian transition zone.

Sexual dimorphism may be well-defined or not. Protarsi can be slightly thickened in males rather than in females. Intermediate antennomeres of male with modifications in certain species. Trochanters and pro- or metatibiae may be derivative in males (modified: curved, spinose or denticulate). Extra exposed abdominal tergite







(morphological tergite VIII) present in males; this tergite is broader than long. Male sternite VII often excavated or truncate apically (different than in females of same species). Male sternite VIII simple and retracted, sclerotized apically. Profemora can be more thickened in males rather than in females.

Preimaginal stage known for *Sapintus vexator* (Werner, 1965) (Kitayama 1982): Average body measurements 5 x 0.6 mm, antenna about 1/4 of head width. Epipharynx almost circular. Left mandible bisetose on dorsolateral margin, right mandible monosetose. Molar area angulated, not facing mola of opposite mandible. Hypopharynx with three rows of spines, two lateral and one posterior. Prothoracic legs with massive coxa, almost 2x longer than trochanter. Femur 2x longer than trochanter. Urogomphi without inner projections, not circular, meeting and finely notched at base, forming interrupted acute emargination. Urogomphi provided with a pair of fine lateral chalazae on inner margin.

Remarks on colouration patterns and possible mimicry among *Sapintus* from the Indo-Australian transition zone

Four main colour schemes can be recognized among Papuan and Pacific *Sapintus* (Table 1). The first group are uniformly dark coloured species - black or brown, sometimes with paler appendages. The second colour scheme comprises a contrasting bicoloured body with pale forebody and appendages and dark coloured elytra. The third colour scheme, the most common, consists of bi- or multicoloured species with a dark or pale forebody and distinct pale markings on generally dark elytra. These elytral markings vary in size, shape and quantity; usually there are two pale spots (yellow, orange or pale red) on each elytron. The fourth colour scheme may be just a branch of the third and is often hard to separate from it, and includes generally pale species with more or less distinct dark markings on the elytra. I was unable to assign *S. adonis* (Pic) and *S. plectilis* (Pic) to any colour scheme due to their specific colourations.

Table 1. Common colour schemes in Papuan and Pacific *Sapintus* and their representatives.

Colour scheme 1	Colour scheme 2	Colour scheme 3	Colour scheme 4
			
<i>Sapintus albertisi</i> (Pic), <i>S. alfurus</i> (Pic), <i>S. insularis</i> (Werner)	<i>Sapintus loriae</i> (Pic), <i>S. macrops</i> sp. nov., <i>S. semirugosus</i> (Pic)	<i>S. carolinensis</i> (Werner), <i>S. celeripes</i> sp. nov., <i>S. curvitibia</i> sp. nov., <i>S. densepunctatus</i> sp. nov., <i>S. dilensis</i> (Pic), <i>S. dyaulensis</i> nom. nov., <i>S. dybasi</i> (Werner), <i>S. geminus</i> sp. nov., <i>S. gemitus</i> sp. nov., <i>S. gracilicornis</i> (Pic), <i>S. horvathi</i> (Pic), <i>S. javanus</i> (Marseul), <i>S. madangensis</i> Uhmman, <i>S. malut</i> sp. nov., <i>S. oceanicus</i> (LaFerté-Sénectère), <i>S. papuus</i> (Pic), <i>S. semirugosus</i> (Pic), <i>S. sexualis</i> sp. nov., <i>S. vexator</i> (Werner)	<i>Sapintus airi</i> sp. nov., <i>S. hirtipennis</i> (Pic), <i>S. insularis</i> (Pic), <i>S. malayensis</i> (Pic), <i>S. monstrosiantennatus</i> sp. nov., <i>S. quadri-notatus</i> (Pic)



It is clear that most *Sapintus* species in the study region are generally dark coloured with four more or less distinct elytral spots. Moreover, at least a third of Oriental *Sapintus* are coloured in that way (only a few Nearctic, Neotropical, Afrotropical or Australian *Sapintus* are similar; these species not listed here). Some remarkable Cleridae are coloured in a very similar way: species of *Anthicoclerus* Schenkling 1906 (distributed from Sri Lanka through mainland SE Asia to New Guinea) possess four large yellow spots on black elytra (Schenkling 1906; Mawdsley 1994). Similarly spotted colouration (dark elytra marked with 4 pale spots) is also not uncommon in Oriental and Papuan species of galerucine and alticine Chrysomelidae (L. Medvedev, personal communication). Among these leaf beetles, reverse cases are not rare, with black spotted generally pale elytra (L. Medvedev, personal communication). Also Coccinellidae species are often coloured in a similar way, but bear completely different – rounded and globose – body shape. I was unable to find any publications on general colour patterns on Coleoptera with hypothetical explanations for colour scheme. According to the theory of natural selection, body colouration will be related to or depends on the natural environment (adaptive background of colouration).

I hypothesize that the aforementioned similarities in colouration among different coleopteran taxa (and probably other insects) can be explained by mimicry. With some exceptions (see comments below), pale spotted *Sapintus*, *Anthicoclerus*, Galerucinae and Alticinae species are diurnal. *Sapintus dilensis* (Pic) was attracted to light in large numbers, but this fact is not controversial as this species is also collected during the daytime. Nocturnal and crepuscular *Sapintus* species may not be selected to evolve mimetic colouration, in contrast to diurnal species attacked by visually-oriented predators like insectivorous birds.

Mawdsley (1994) analysed mimic interactions in Cleridae and assumed for *Anthicoclerus* that ‘although this name implies mimicry of Anthicidae (Coleoptera), it is probable that the two species in this genus and the anthicids for which this genus was named mimic Formicidae (Hymenoptera)’. I cannot reject or confirm this, but at least one well-known fact speaks against it. Many anthicidan taxa are considered to be canthariphilous (Young 1984) and bear a pair of specific mesothoracic glands. The role of these glands in the ecology of the Anthicidae was discussed previously (Hemp, Dettner 1997). Mesothoracic glands are only known to be present in two beetle families - Anthicidae and Meloidae

(Hemp, Dettner 1997). Mesothoracic glands of the Anthicidae contain iridoid components and glands are present in both sexes (Hemp, Dettner 1997). According to the studies carried by Hemp & Dettner (1997), secretions of the glands cause topical irritancy on potential predators, such as *Lasius* and *Myrmica* ants: ‘ants ..., topically treated with freshly dissected ... mesothoracic glands [of the Anthicidae], showed similar reactions as described for iridomyrmecin as a topically acting insecticide ... All specimens made intensive cleaning movements ... the ants were completely disorientated, turning in circles. The legs also seemed to be paralysed. After 30-60 minutes, the ants returned to normal behaviour’. Iridoid components of mesothoracic glands, as also with cantharidin itself, are also poisonous to vertebrates, causing severe chemical burns (in cases of topical contact) or strong poisoning (when swallowed).

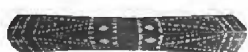
Young (1984) and Hemp (1994) listed several species of *Sapintus* as canthariphilous insects, three of them occur in the study region (*S. javanus* (Pic), *S. malayensis* (Pic), *S. plectilis* (Pic)). The first two are questionable (consider comments under ‘ecology & biology’ of each species). This information confirms *Sapintus* spp. as a potentially harmful group of insects.

In my opinion, all the taxa of Anthicidae (*Sapintus*), Cleridae (*Anthicoclerus*) and Chrysomelidae (Alticinae & Galerucinae) discussed above are possible part of a Batesian mimicry complex (when a group of harmless species [Cleridae, Chrysomelidae] share the same basic colour pattern and body form of toxic or harmful species [*Sapintus* spp.]). The possible role of Coccinellidae in aforementioned mimicry complex cannot be properly evaluated. This only can be proved by further investigations.

The main question remaining unanswered is why there are so many similarly coloured pale-spotted species among Oriental & Papuan *Sapintus*. My second hypothesis is that these species are members of a Müllerian mimicry complex (when a group of toxic or harmful species share the same basic colour pattern and body form). In this case all these species belong to the same taxonomical group.

Diversity and distribution of *Sapintus*

Distribution: Worldwide except Antarctic, absent at high latitudes. *Sapintus* are most diverse in tropical and subtropical regions of Asia (including both mainland and insular systems) and Central



Africa. Several species like *S. oceanicus* (LaFerté-Sénéctère, 1849) are distributed over huge areas and recorded from several biogeographical regions (numerous Pacific islands, coastal areas of Asian and Australian mainland, various Indian islands, eastern coast of Africa, Madagascar). On the other hand, other species may have limited or very limited distribution areas, like endemics of Pacific islands New Caledonia - *S. austrocaledonicus* (Montrousier, in Perroud et Montrousier, 1865), Ryukyu Islands - *S. hamai* (Nomura, 1964), or Samoa - *S. samoanus* (Pic, 1908). Subgenus *Barbigerosapintus* Telnov, 1998 seems a group of 10 or over Oriental species limited to Asian mainland northwards to southern slopes of Himalayas, Sri Lanka and reaching the Philippines on insular systems isolated from Sunda shelf.

Biogeographical regions: Palaearctic, Afrotropical, Oriental, Nearctic, Neotropical, Australian. This group demonstrates signs of Gondwanan origin (Bonadona 1958).

Diversity, recent species and lower rank taxa: Nearctic and Neotropical faunal composition is better known, as these been two revisions by Werner (1962, 1983). Nearctic fauna consist of 14 species partly shared with Neotropical fauna (species reaching Central America or Caribbean Islands in their distribution). Neotropical fauna as far as known is richer and consists of 19 species plus 7 shared with Nearctic fauna. Palaearctic fauna consists of 19 species mostly distributed along southern and eastern limits of this choron; additional 13 species are shared with the Oriental region and one (*S. oceanicus*) – with both Oriental and Australian regions. Oriental fauna counting no less than 40 species plus same 13 shared with the Palaearctic fauna. Afrotropical region is as far as known the richest on *Sapintus* with over 58 species recorded from here. Notably, 99% of sub-Saharan African *Sapintus* are endemic to this choron and only single species is shared with the Oriental and Australian regions. Australian fauna is poorly studied but no less than 20 species occur here. The Indo-Australian transition zone's fauna of *Sapintus* according to this study contains 31 species.

Diversity, fossil species: No fossil records hitherto known for *Sapintus*.

Ecology and biology of *Sapintus*

No special attention was paid by previous authors to ecological preferences and the biology of *Sapintus*. Fragmentary data from literature

supplemented with the author's personal observations are summarized below.

Three main ecological groups could be defined within *Sapintus* on the basis of geographical distribution of species. The main part of Nearctic species considered silvicol and are associated with mesophytic forested areas. Inhabitants of open habitats of South Palaearctic, South Nearctic, East and South Afrotropical and Australian (Queensland species excepted) faunas are deserticol, as these connected with arid to semi-arid regions. Silvicol species of tropical, subtropical and temperate rainforests of East Nearctic, Neotropical, East Palaearctic, Central Afrotropical, Oriental and North-East Australian faunas is the most diverse ecological group. On Sulawesi, several specimens were obtained from flood debris along forest streams (possible riparian species).

Many ecological niches recorded as inhabited by *Sapintus*. Adults of most Nearctic and some East Palaearctic species are reported to be associated with riparian habitats (Chandler 2002; Werner, Chandler 1995; Telnov, unpublished data) and considered riparian. Similar niche preferences demonstrate few Nearctic (Werner 1962) as well some Afrotropical species found in sand dunes. *S. bagiuniensis* Ronchetti, Colombini, Chelazzi, 1986 from coastal sandy dunes of Somalia coast considered psammophyl and riparian (Ronchetti, Colombini, Chelazzi 1986), *S. brincki* Bonadona, 1986 reported from sandy shores of Sri Lanka (Bonadona 1986). Silvicol species are reported from wet leaf litter (epigeic species) (Werner, Chandler 1995), as also from tree leaves and branches of lower (understorey) and canopy layer (Telnov, unpublished data). These silvicol species are known to have been mostly taken or beaten from vegetation (Werner 1962, 1983), under tree bark (Werner 1962), in moss 'roots' or under fallen wood (Werner 1962).

Sapintus are reported from various plants - grass level, bush or high trees. Werner and Chandler (1995) mentioned that monocots were being visited by various Nearctic, Neotropical and New Zealand species of *Sapintus*. Werner (1962) reported *Sapintus* associated with *Typha* spp., found beetles between dry leaves at the bases of plants and on stem. *Sapintus pellucidipes* (Broun, 1880) confirmed for both New Zealand autochthonous and imported monocots (*Carex* spp., *Freycinetia baueriana* (A. Cunningham), *Gahnia lacera* A. Richard, *G. setifolia* Hook, *Uncinia* spp., *Cortaderia jubata* (Lemoine) Stapf) (Kuschel 1990). This species found on bushes and in bush



canopy. Nearctic species also recorded from *Medicago sativa* (Linnaeus) and on cotton buds (Werner 1983). Argentinean *Sapintus decerptus* (Pic, 1904) was collected from blossoms of *Aeschynomene montevidensis* Vogel, *Cynara cardunculus* (Linnaeus), and *Eryngium eburneum* Decne (Werner 1983). At least one species – *Sapintus monstrosiantennatus* sp. nov. (see description of this species below) - recorded from cocoa tree (*Theobroma cacao* Linnaeus). Males of widespread Pacific-Papuan-Oriental *S. vexator* (Werner, 1965) collected from *Portulaca lutea* Soland. ex G.Forst. (Werner 1965).

Interesting seems a report on adults and larvae of Neotropical *Sapintus similis* Werner, 1983 obtained from the egg sac of *Tetragnatha* sp. spider (Werner 1983).

Various species of *Sapintus* have different preferences of sunlight and are diurnal, nocturnal or crepuscular. For example, specimens of *Sapintus malut* sp. nov. were beaten in large numbers from secondary roadside vegetation in Central Halmahera during the hot midday, on the open sun (Telnov, unpublished data). Somalia's *S. bagiuniensis* reported be active at dawn during the dry season (Ronchetti, Colombini, Chelazzi 1986). Many species recorded were attracted to light (Werner 1983; Telnov, unpublished data; Weigel, personal communication). Among species of Indo-Australian transition zone, at least *S. dilensis*, *S. gracilicornis* and *S. vexator* were attracted to white (Telnov, unpublished data), UV (Werner 1983), or mercury vapour light (Bonadona 1981; Telnov, unpublished data).

As already stated above, several if not all Nearctic, Afrotropical, Oriental and Papuan *Sapintus* are canthariphilous.

Nomenclatural changes

For Anthicinae it was a typical case by earlier authors to place most of their new species to *Anthicus* sensu lato. Many Anthicinae species originally described 50-100 years ago and their descriptions are insufficient. Consequently, almost each taxonomical review results in several nomenclatural changes.

Thirteen new combinations made here are based on morphological and anatomical characters of the genus *Sapintus* presented in studied specimens (these characters are discussed above in 'Morphology and anatomy of *Sapintus*'). All new combinations based on study of type specimens.

Sapintus (s. str.) *adonis* (Pic, 1900) **comb. nov.**
(from *Anthicus* Paykull)

Sapintus (s. str.) *alfurus* (Pic, 1900) **comb. nov.**
(from *Anthicus* Paykull)

Sapintus anguliceps (LaFerté-Sénéctère, 1849)
comb. nov. (from *Cyclodinus* Mulsant et Rey)

Sapintus (s. str.) *bizonellus* (Marseul, 1882a)
comb. nov. (from *Anthicus* Paykull) (see also
Telnov 2006a)

Sapintus (s. str.) *bryanti* (Pic, 1911) **comb. nov.**
(from *Anthicus* Paykull) (see also Telnov 2007a)

Sapintus (s. str.) *dybasi* (Werner, 1965) **comb. nov.**
(from *Anthicus* Paykull)

Sapintus (s. str.) *hirtipennis* (Pic, 1900) **comb. nov.**
(from *Anthicus* Paykull)

Sapintus (s. str.) *insulanus* (Pic, 1900) **comb. nov.** (described as *Anthicus* Paykull, Uhmman (1990: 142) moved this species to *Hirticomus* Pic (now *Hirticollis* Marseul). This species was subsequently cited as *Hirticomus* by Uhmman (2000))

Sapintus (s. str.) *insularis* (Werner, 1965) **comb. nov.** (from *Anthicus* Paykull)

Sapintus (s. str.) *laticollis* (Pic, 1929) **comb. nov.**
(from *Anthicus* Paykull)

Sapintus (s. str.) *loriae* (Pic, 1900) **comb. nov.** (from
Anthicus Paykull)

Sapintus (s. str.) *quadrinotatus* (Pic, 1900) **comb. nov.** (from *Anthicus* Paykull)

Sapintus (s. str.) *semirugosus* (Pic, 1902) **comb. nov.** (from *Anthicus* Paykull)

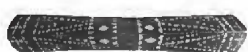
Sapintus subopaciceps (Pic, 1913) **stat. rev.** (from
Anthicus Paykull)

Originally described as *Anthicus*, this species was first placed to *Sapintus* by Uhmman (1993: 401). Telnov (2007c: 32) studied the holotype and moved this species back to *Anthicus*. In fact, the holotype was an old specimen collected or stored under insufficient conditions and therefore lacking mesepisternal setae. After getting in to my hands a fresh specimen from Indonesian Borneo it was re-confirmed, this species have *Sapintus*-typical setose mesepisterna. Consequently, I am restoring this species in *Sapintus*, as it was proposed by Uhmman (1993).

The following new synonymy was confirmed:

Sapintus anguliceps (LaFerté-Sénéctère, 1849a)
= *Sapintus apicatus* (Fairmaire, 1896) **syn. nov.**

= *Sapintus apicatus birmanicus* (Pic, 1907)
syn. nov. (see also Chandler, Nardi, Telnov 2004)



Sapintus dilensis (Pic, 1900)
= *Sapintus relatus* Bonadona, 1981 **syn. nov.**

Sapintus flavonotatus (Pic, 1908)
= *Sapintus barbei* Bonadona, 1978 **syn. nov.**
Remark: I am not familiar with the taxon described as *Sapintus barbei ceylonicus* Bonadona, 1986. This taxon to be remained as subspecies of *S. flavonotatus* until type material will be located and studied.

= *Anthicus meritorius* Pic, 1914 **syn. nov.**

Sapintus gracilicornis (Pic, 1895)
= *Anthicus gracilicornis* v. *semiobliteratus* Pic, 1900 **syn. nov.**
= *Anthicus neoguineensis* Pic, 1900 **syn. nov.**
= *Sapintus repentinus* Bonadona, 1981 **syn. nov.**

Sapintus insularis (Werner, 1965)
= *Sapintus placitus* Bonadona, 1981 **syn. nov.**

Sapintus javanus (Marseul, 1882a)
= *Sapintus sodalis* (Pic, 1895) **syn. nov.**

Sapintus oceanicus (LaFerté-Sénéctère, 1849a)
= *Anthicus oceanicus* var. *Françoisi* Pic, 1902 **syn. nov.**

Sapintus rarus (King, 1869)
= *Sapintus deitzi* Werner, Chandler, 1995 **syn. nov.**

King (1869: 22) described *Anthicus rarus* from Australia. MacLeay (1872: 307) added a new variation, *A. rarus* var. *propinquus*. This taxon was synonymised with nominative form by Lea (1895: 621). Uhmman (1995a: 525) proposed a new combination for *A. rarus* to *Sapintus* where it remained until now. Later, Uhmman (2007: 51) mentioned *Anthicus propinquus* MacLeay as a good species of *Anthicus* and separately from *Sapintus rarus* (King). Bonadona (1981: 195) described *Sapintus propinquus* from Bismarck Archipelago which have been consequently cited by Telnov (1999: 78). Thereafter, van Hille (1988: 324) described *Anthicus (Aulacoderus) propinquus* (now *Aulacoderus*) from South Africa. Last taxon has never been cited since the original description. I propose the following new names for the following aforementioned taxa:

Sapintus dyaulensis **nom. nov.**, new name for *Sapintus propinquus* Bonadona, 1981

Aulacoderus nigroelytratus **nom. nov.**, new name for *Anthicus (Aulacoderus) propinquus* van Hille, 1988 [I am not familiar with current status of this species].

Species groups

At least six species groups can be treated among the *Sapintus* inhabiting the study region and adjacent territories. These groups are informal and are based on morphological similarities rather than on phylogenetic relationships.

Sapintus celeripes group

Species with pale markings in form of spots or transverse bands on generally dark elytra. Pronotum distinctly narrowed postmedium laterally. Forebody very densely punctured, intervening spaces smaller than punctures and whole dorsal surface of forebody looks opaque (certain specimens of *S. celeripes* sp. nov. are sparse punctured on head with intervening spaces generally broader than punctures). Male or female metatibiae modified - widened or slightly curved.

The following species are herewith arranged to this group: *S. celeripes* sp. nov., *S. malut* sp. nov., *S. sexualis* sp. nov. (all from Papuan region).

Sapintus gracilicornis group

Generally large species (*S. carolinensis* is the smallest within the group) with long and slender antennae and four pale spots on generally dark elytra (anterior pair or spots may be more or less reduced in certain specimens). Dorsal surface coarse and dense punctured, but generally smooth between punctures. Elytral pubescence often very long, erect to suberect. Male aedeagus long and slender, pubescent or not pubescent laterally, slightly prolongate apically.

The following species are herewith placed in this group: *S. andreaskopetzi* sp. nov. (Nepal), *S. binhensis* (Pic, 1922) (Vietnam), *S. carolinensis* (Werner, 1965) (Micronesia), *S. cochaeres* (Lewis, 1895) (Japan, Far East of Russia), *S. cruciellus* (Marseul, 1882a) (Indonesia: Java), *S. dyaulensis* Telnov (consider name change above) (Bismarck Archipelago & New Guinea), *S. gracilicornis* (Pic, 1895) (Oriental & Papuan region), *S. hirtisetosus* (Marseul, 1884) (Indonesia: Sumatra, The Philippines: Luzon, Palawan), *S. inspoliatus* Bonadona, 1981 (The Philippines: Tawi-Tawi), *S. litorosus* (Lewis, 1895) (Japan), *S. longehirsutus* (Pic, 1922) (Vietnam), *S. longepilosus* (Pic, 1942) (China, without



precise location), *S. marseuli* (Pic, 1892) (Japan, S & E China, Nepal, Taiwan, Thailand, Vietnam), *S. nomurai* Nardi, 2004 (Japan: Ryukyu Islands), *S. subrubrocinctus* (Marseul, 1882a) (Indonesia: Sumatra), *S. triparticornis* (Pic, 1926) (Vietnam).

***Sapintus horvathi* group**

Species with pale markings in form of spots or transverse bands on generally dark elytra (*S. hirtipennis* is generally paler than other members of the group). Pronotum distinctly narrowed postmedium laterally. Head and anterior portion of pronotum (at least) smooth and shiny, sparsely punctured. Elytra with feeble but visible postbasal transverse impression. Tegmen of male aedeagus broad, setose on lateral margins, broadly rounded or obtuse angulate apically.

The following species are herewith placed in this group: *S. geminus* sp. nov., *S. hirtipennis* (Pic, 1900), *S. horvathi* (Pic, 1902) (all from Papuan region).

***Sapintus javanus* group**

Small, very coarse punctured species with two pairs of pale spots on generally black elytra (first pair distinctly larger). Eyes small, tempora almost straight, head base very broadly rounded. Antennae bicolourate (pale at base). Male aedeagus elongate and slender, pointed apically, with or without little preapical lateral denticles.

This group contains *S. hartmanni* sp. nov. (Nepal), *S. javanus* (Marseul, 1882a) (Oriental & Papuan regions), *S. latioricollis* (Pic, 1929) (Vietnam, Thailand).

***Sapintus oceanicus* group**

Species with four pale spots on generally darker elytra. Forebody densely punctured, intervening spaces narrower than punctures (in certain specimens of *S. vexator* punctures may also be generally coarser and sparser). Male aedeagus quite simple with more or less strongly prolongate apex.

This group contains: *S. densepunctatus* sp. nov., *S. dilensis* (Pic, 1900) (both from Papuan region), *S. oceanicus* (LaFerté-Sénectère, 1849a), *S. vexator* (Werner, 1965) (both widely distributed in coastal areas of the Pacific and Indian oceans).

***Sapintus plectilis* group**

Generally pale species with or without dark markings on elytra. Male intermediary antennomeres modified in some species. Tegmen of male aedeagus (in species with males described) slightly spatulate-like widened preapically, with narrow and

somewhat prolongate apex.

This group contains: *S. insulanus* (Pic, 1900) (Papuan region, possible Australia: Queensland), *S. insignatipennis* (Pic, 1943) (S India), *S. monstrosiantennatus* sp. nov. (Wallacea), *S. plectilis* (Pic, 1910) (Wallacea & Oriental region), *S. pollocki* Uhlmann, 1999 (Australia: Queensland).

Diagnoses of *Sapintus* species from the Indo-Australian transition zone

Please refer to 'Material and methods' for additional information on the structure of the current chapter.

***Sapintus* (s. str.) *adonis* (Pic, 1900) (Plate 44 figs 1-2)**

Holotype ♀ MSNG: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / Typus [printed, label red, black border] / Adonis Pic [handwritten, black border] / A. adonis Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Measurements, holotype ♀: Total body length 3.12 mm, maximum combined width immediately postmedium of elytra 0.90 mm. Head 0.62 mm long, across the eyes 0.60 mm broad, pronotum 0.60 mm long, maximum width 0.50 mm, elytra 1.90 mm long, 0.90 mm postmedium broad.

Description: Head, pronotum and scutellum orange-red. Elytra black with apical third orange (paler than forebody). Three basal antennomeres are pale, remaining antennomeres are black-brown. Palpi yellowish, partly darkened. Femora reddish to reddish brown, tibiae and tarsi blackish-brown. Underside uniformly black. Head dorsally and ventrally smooth and shiny. Eyes midsized, slightly protruding from outline of the head. Tempora about 1/4 shorter than the length of an eye, converging toward a very broadly rounded, subtruncate base. Punctures very fine and sparse, hardly visible. Intervening spaces much larger than punctures. Dorsum of head fine, whitish, very sparse but quite long pubescence. Antennae long and slender, reaching over elytral humeri in the female. Second antennomere shorter than the next one. Antennomeres 3-8 elongate, slightly thickened distally. Terminal antennomere asymmetric, blunt, 1/4 longer than the penultimate one. Terminal maxillary palpomere large and somewhat axiform. Pronotum smooth and shiny, somewhat globose dorsally, with feeble postmedian lateral transverse impression, narrower than the head. Anterior margin broadly rounded.



On sides and near base with numerous large pores, on disc very sparsely punctate. Intervening spaces ranging from larger than punctures (in basal part) to much larger than punctures (on disc). Pubescence extremely sparse, somewhat longer than on the head, with separate erect tactile setae on the sides and on the disc. Scutellum rounded apically, densely pubescent. Elytra elongate, smooth and shiny. Punctures very large (pore-like) in the basal half, getting smaller postmedium. In the basal half, intervening spaces range from as large as the punctures to twice as large as the punctures. Intervening spaces getting larger postmedium. A very long erect white tactile seta rises from each pore. Pubescence simple, with no undersetae present on the dorsum. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Female basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite and sternite VII not studied. Genital organs not studied.

Sexual dimorphism: Male is unknown.

Distribution: This species is only known by the holotype collected by L.M. D'Albertis on the River Fly in the southern lowlands of Papua New Guinea and without precise locality. D'Albertis reached up to 580 miles (~937 km) upriver during his expedition. Consequently, the locus typicus of this species is somewhere between the delta and 937 km of the River Fly course.

Remarks: A very atypical *Sapintus* with a smooth and very sparsely punctured forebody and lacking undersetae on the elytra. The holotype, however, has remnants of the fringe of the setae on the lateral margins of the mesepisterna, as in a typical *Sapintus*.

***Sapintus* (s. str.) *airi* sp. nov.** (Figs 1-7, map 2, plate 44 figs 3-4)

Holotype ♂ BMNH: at light [printed] / SOLOMON ISLANDS: San Cristoval, S. Wainoni. 25.vii.65 P.N. Lawrence. B.M.1966-1. [printed].

Paratypes 4 specimens. 1♂ BMNH: Guadalcanal [printed] 9th Dec [handwritten] 196 [printed] 5 [handwritten] / M. McQuillan [printed] 21 0 1 6 [handwritten] SOLOMON IS. [printed] / SOLOMON IS: Pres. P.J.M.Greenslade. B.M.1966-477. [printed]; 1♀ BMNH: at light [printed] / SOLOMON ISLANDS: Guadalcanal, nr. Honiara, Kukum. Vii-viii.65. P.N.Lawrence. [printed]; 1♂ BMNH: SOLOMON IS. Guadalcanal [printed] 4644. Conga 4/3. [handwritten] 196 [printed] 3. [handwritten] P.GREENSLADE [printed] / SOLOMON IS: Pres. P.J.M.Greenslade. B.M.1966-477. [printed].

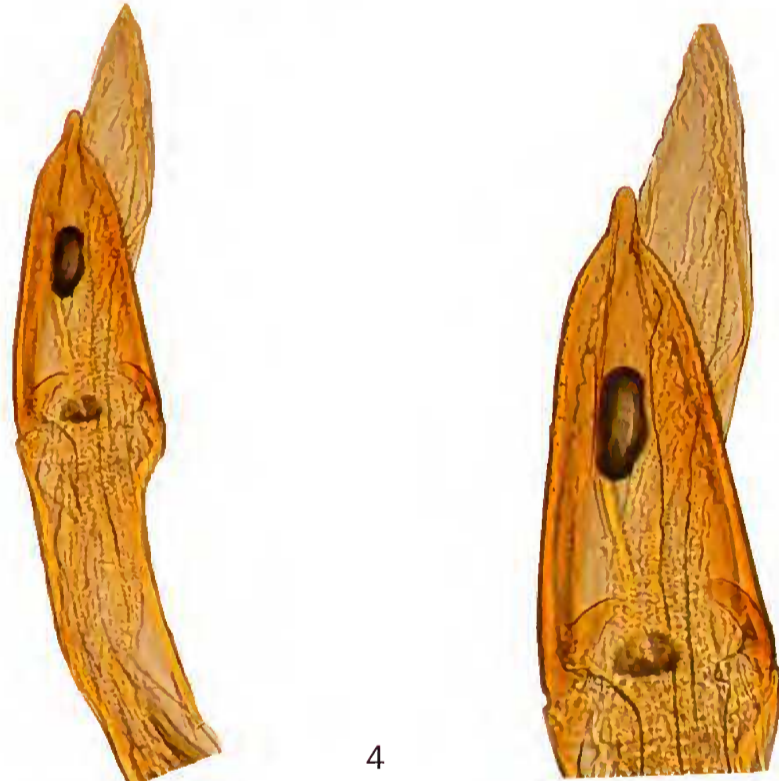
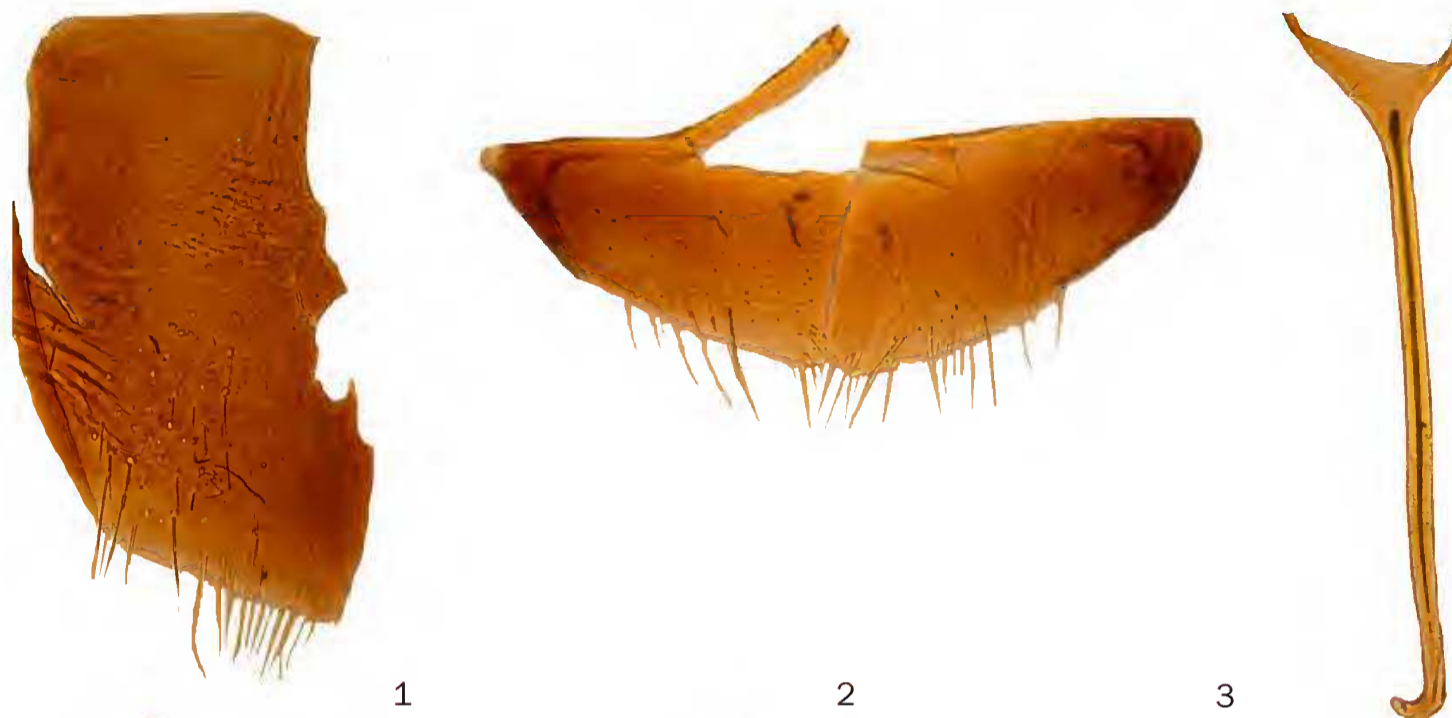
Derivatio nominis: Named after 'airi', the mythical shark of Solomon Islands traditional mythology. Measurements, holotype male: Total body length 2.51 mm, maximum combined width across the middle of elytra 0.77 mm. Head 0.56 mm long, across the eyes 0.51 mm broad, pronotum 0.45 mm long, maximum width 0.40 mm, elytra 1.50 mm long, 0.77 mm broad. Measurements, paratype female from Guadalcanal: Total body length 2.56 mm, maximum combined width across preapical third of elytra 0.84 mm. Head 0.56 mm long, across the eyes 0.52 mm broad, pronotum 0.54 mm long, maximum width 0.42 mm, elytra 1.46 mm long, 0.84 mm broad.

Description: Forebody orange, head is darker. Elytra yellow with black markings, consisting of a little humeral and a large semicircular median spot on each elytron, plus a large combined spot covering the apices. Antennae, with the exception of 2-3 terminal antennomeres, palpi and legs yellow. Protibiae (in one paratypic specimen also mesotibiae) darkened, brown. Underside reddish-brown to orange, pro- and mesocoxae yellow-coloured. Body colouration somewhat resembles the Palearctic *Stricticollis peplifer* (Marseul, 1879) or the Papuan *Sapintus hirtipennis* (Pic, 1900). Head smooth dorsally, weakly shiny. Eyes midsized, weakly prominent, in the dorsal view slightly longer than the straight tempora. Temporal angles broadly rounded. Head base truncate or subtruncate. Punctures quite large but very flat and sparse, intervening spaces mostly larger than punctures. Large areas on frons and vertex are impunctured. Pubescence yellow, fine and long. Antennae slender, in both sexes reaching over elytral humeri. Second antennomere in male 1/4 shorter than next one. Antennomeres 3-8 elongate and slender. Antennomeres 9-10 slightly shortened and thickened. Terminal antennomere asymmetric, conical, pointed, 1/4 longer than penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum rounded anteriorly, narrower than head, strongly narrowed postmedium laterally toward base. Dorsally smooth, densely and confusedly punctured on disc (especially postmedium). Punctures of variable size, intervening spaces smaller than punctures. Antero-lateral margins smooth, almost impunctured. Pubescence yellow, fine, long and dense, appressed, with separate long erect tactile setae on the sides and on the disc. Scutellum narrowly triangular, pointed apically. Elytra elongate and slightly widened across middle or postmedium, smooth dorsally. Humeri rounded. Punctures large and dense, getting more flat in apical third. Inter-

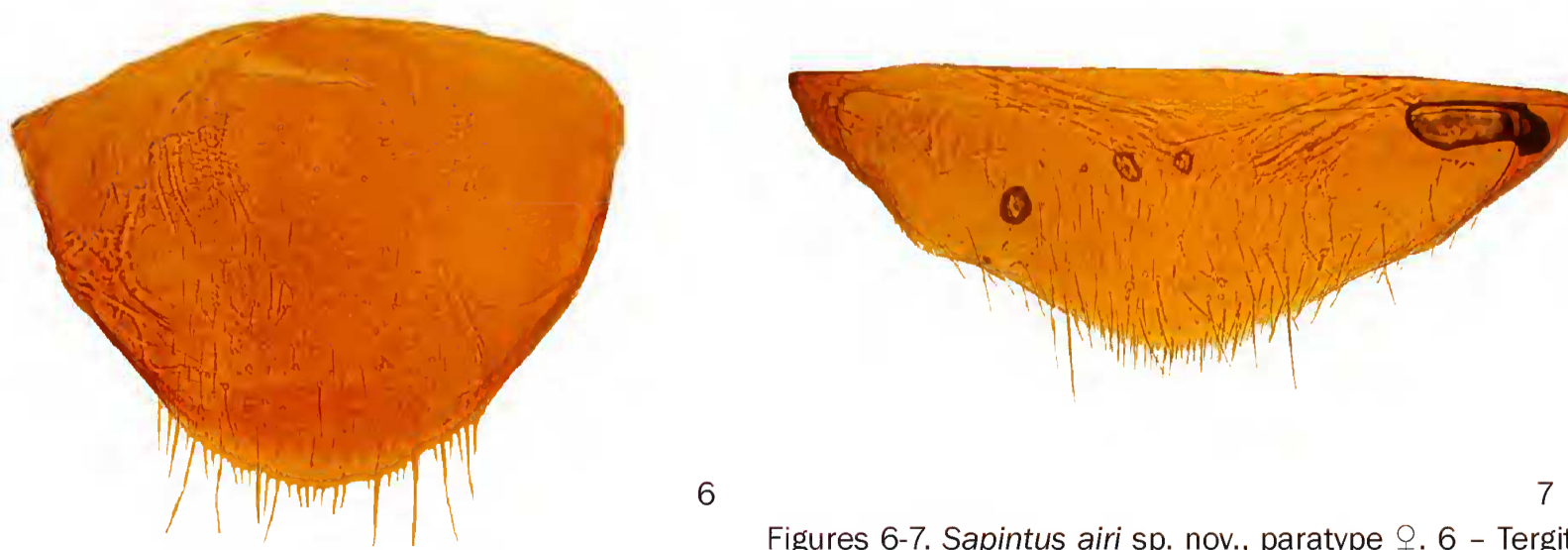


vening spaces ranging from smaller than punctures to as large as punctures. Pubescence yellowish, long and dense, suberect, with several very long

erect to suberect tactile setae present on the disc. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward postbasal



Figures 1-5. *Sapintus airi* sp. nov., holotype ♂. 1 - Tergite VII; 2 - Sternite VII; 3 - Spiculum gastrale; 4 - Aedeagus; 5 - Tegmen of aedeagus & penis.



Figures 6-7. *Sapintus airi* sp. nov., paratype ♀. 6 - Tergite VII; 7 - Sternite VII.



transverse impression of elytra. Hind wings fully developed. Legs long and slender. Protibiae slightly thickened in both sexes, but in the male with very feeble excavation on inner distal part. Female metatibiae thickened compared to slender male tibiae. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male trapezoid, truncate on apical margin (Fig. 1). Morphological sternite VII in male short, very broadly rounded on apical margin (Fig. 2). Male aedeagus with apically narrowly prolonged tegmen (Figs 4-5). Tegmen with strong basal hook on each side. Morphological tergite VII in female broadly rounded and with long setation on apical margin (Fig. 6). Morphological sternite VII in female broadly rounded on apical margin (Fig. 7).

Sexual dimorphism: Almost not indicated. Intermediary antennomeres (3-7) comparatively slightly shorter in female than in male. Female metatibiae thickened compared to slender metatibiae of male. Ecology & biology: Two of the type specimens were collected at light.

Differential diagnosis: Among all *Sapintus* species from the Indo-Australian transition zone, *Sapintus airi* is conspicuous due to its generally pale dorsal body colouration. *S. hirtipennis* (Pic, 1900) (Papuan Peninsula of New Guinea) is very similarly coloured, but is different, primarily due to its rounded head base (truncate / subtruncate in *S. airi*), short tempora (in dorsal view almost as long as the eye in *S. airi*), punctures being coarse and partly rugulose on the pronotal disc (dense but not rugulose in *S. airi*), elytral punctures being smaller and sparser (large and dense in *S. airii*). The male genital organs were not studied in *S. hirtipennis* (the male is unknown).

Distribution: This species is known from the eastern part of the Solomon Islands, particularly from San Cristobal (= San Cristoval) and Guadalcanal islands (map 2).

Sapintus* (s. str.) *albertisi (Pic, 1900) (Figs 8-9, plate 44 figs 5-7)

Lectotype ♀ MSNG [herewith designated]: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / Typus [printed, label red, black border] / Albertisii [sic!] Pic [handwritten, black border] / A. Albertisi Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Paralectotypes 18 specimens [herewith designated]: 12 MSNG: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / type [handwritten] / TYPE [printed, label red, black border] / albertisii [sic!] Pic [handwritten]; 5 MNHN, 1 DTC: Nuova Guinea Fly River

L.M.D'Albertis 1876-77 [printed, black border] / type [handwritten] / TYPE [printed, label red] / A Albertisi Pic [printed, black border].

Measurements, lectotype ♀: Total body length 3.15 mm, maximum combined width across the middle of elytra 1.05 mm. Head 0.60 mm long, across the eyes 0.69 mm broad, pronotum 0.58 mm long, maximum width 0.50 mm, elytra 1.97 mm long, 1.05 mm broad.

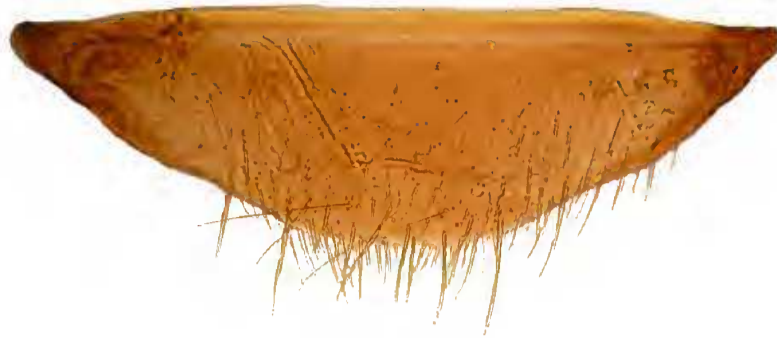
Description: Forebody black, elytra dark brown to black. Antennae black-brown with three basal antennomeres paler. Maxillary palpi brown. Femora brown, tibiae and tarsi black to dark brown. Underside uniformly black to dark brown. Head with large prominent eyes, very densely punctate. Tempora about 1/3 of the length of an eye. Head base almost truncate, very broadly rounded. Punctures of two sizes: basic punctures very small and dense, covering the whole dorsum of the head and with intervening spaces being smaller than these punctures. Additional larger - but flat and much sparser - punctures scattered over the frons and the vertex. Pubescence fine, whitish, quite long and dense. Antennae long and slender, reaching over elytral humeri in the female. Second antennomere shorter than the next one. Antennomeres 3-8 elongate, slightly thickened distally, 9-10 stronger, widened distally. Terminal antennomere asymmetric, pointed, slightly longer than the penultimate one. Terminal maxillary palpomere large and somewhat axiform. Pronotum very densely punctate dorsally, with weak postmedian lateral transverse impression, significantly narrower than the head. Anterior margin broadly rounded. Punctures double, similar to the ones on the head, but both groups of punctures are generally larger. Pubescence like on the head but generally longer and with separate erect tactile setae on the sides and on the disc. Scutellum truncate apically. Elytra elongate, smooth and shiny. Punctures very large and dense but getting somewhat smaller in apical third. Intervening spaces smaller or equal to punctures. Main pubescence pale brown, long and dense, suberect. Undersetae dense, directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Female basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in female broadly rounded on apical margin (Fig. 8). Morphological sternite VII in female short and broad, broadly rounded on apical margin (Fig. 9).

Sexual dimorphism: The antennae are compar-





8



9

Figures 8-9. *Sapintus albertisi* (Pic, 1900), paralectotype ♀. 8 – Tergite VII; 9 – Sternite VII.

atively shorter in the female than in the male.

Distribution: This species is only known by the holotype collected by L.M. D'Albertis on the River Fly in the southern lowlands of Papua New Guinea and without precise locality. D'Albertis reached up to 580 miles (~937 km) upriver during his expedition. Consequently, the locus typicus of this species is somewhere between the delta and 937 km of the River Fly course.

Sapintus* (s. str.) *alfurus (Pic, 1900) (Map 3, plate 45 figs 1-2)

Holotype ♂ MSNG: N.GUINEA MER. KAPAKAPA Mag. *Giugno.1891* L.Loria [printed, text partly italic, black border] / Typus [printed, text red, red border] / *alfurus* Pic [handwritten, black border] / *Anthicus alfurus* Pic typus ! [handwritten] / Mus. Civ. Genova [printed, label pale].

Measurements, holotype ♂: Total body length 2.46 mm, maximum combined width immediately behind the middle of elytra 0.84 mm. Head 0.55 mm long, across the eyes 0.53 mm broad, pronotum 0.47 mm long, maximum width 0.51 mm, elytra 1.44 mm long, 0.84 mm postmedium broad.

Description: Forebody black, elytra black-brown. Antennae pale brown with three black-brown terminal antennomeres. Palpi brown to yellowish brown. Legs brown to black. Underside uniformly black-brown. Head smooth and somewhat shiny, with large prominent eyes. Tempora about a half of an eye's length, slightly converging toward a subtruncate head base. Punctures of variable size – smaller and large, with smooth intervening spaces that also vary widely in size. Frons with distinct broad impunctured median line. Vertex feebly impressed medially. Pubescence greyish, long and quite dense. Antennae short, hardly reaching elytral humeri in the male. Second antennomere more

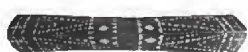
or less as long as the next one. Antennomeres 8-10 shortened and distinctly thickened distally. Terminal antennomere asymmetric, bluntly conical, 1/4 longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum dorsally very densely punctate, flattened, broadly rounded anteriorly and the lateral margins distinctly constricted posterior to the pronotal midpoint, just slightly narrower than the head. Punctures very dense and coarse, intervening spaces much smaller than the punctures. Pubescence greyish, fine, long and dense, suberect, with several erect tactile setae on the sides and on the disc. Scutellum small, triangular. Elytra elongate, smooth and shiny. Punctures very large and dense in the basal half, getting much smaller and sparser postmedially. Intervening spaces irregular, in the basal half mostly smaller, in the postmedian half ranging from as large to 3 times larger than punctures. Pubescence yellowish, fine, long and dense, directed obliquely laterally. Undersetae directed obliquely laterally. Sutural striae broad, developed from the middle toward the apices. Hind wings fully developed. Legs long and slender, especially femora. Morphological tergite VII and sternite VII not studied. Male aedeagus with prolongate and pointed apex.

Sexual dimorphism: Female is unknown.

Distribution: This species is only known by the holotype collected at Kapa Kapa (= Gabagaba) village in Central Province, Papua New Guinea.

***Sapintus* (s. str.) *celeripes* sp. nov.** (Figs 10-15, map 3, plate 46 figs 1-4)

Holotype ♂ NME: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3°46'42"S, 134°10'24"E, 50-130 m, 10.IX.2010, secondary rainforest on limestone & clear-



ings, leg. D.Telnov.

Paratypes 4 specimens. 1♀ DTC: same labels as in holotype; 1♂ NME: W-PAPUA Raja Ampat Prov. Salawati Isl. or., Kalobo 01°03'15"S, 131°04'32"E 24.-28.I.2004 leg. A.Skale; 1♀ DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Lobo vill. env., 3°44'55"S, 134°06'42"E, 0-50 m, 15.IX.2010, sago swamp, leg. D.Telnov; 1♀ DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 2-4 km NE, 3°39'26"S, 133°46'21"E, 150-200 m, 19-20.IX.2010, primeval lowland rainforest & clearing, limestone, leg. D.Telnov.

Derivatio nominis: Named from the Latin 'celeripes' [outrunner], because of the adults being very agile and quick moving.

Measurements, holotype ♂: Total body length 2.50 mm, maximum combined width across the middle of elytra 0.75 mm. Head 0.56 mm long, across the eyes 0.52 mm broad, pronotum 0.52 mm long, maximum width 0.45 mm, elytra 1.40 mm long, 0.75 mm broad. Measurements, paratype ♀ from vicinity of Kaimana: Total body length 2.95 mm, maximum combined width across the middle of elytra 0.90 mm. Head 0.70 mm long, across the eyes 0.66 mm broad, pronotum 0.55 mm long, maximum width 0.58 mm, elytra 1.70 mm long, 0.90 mm broad.

Description: Forebody orange, head darker in some paratypic specimens. Elytra black with pale markings, consisting of a yellow-to-orange broad postbasal transverse band and broad circular or transverse spot in the apical third of each elytron. Anterior band is not bearing lateral margins of elytra, can be narrowly interrupted by darker colouration of suture. Posterior spot or band not bearing lateral margin and is narrowly interrupted on suture, its anterior margin not straight but with pointed projection of black colouration in the middle. Antennae, palpi and legs yellow-to-orange. Underside reddish-brown to orange, coxae paler coloured. Head smooth, with large prominent eyes. Tempora broadly rounded together with base. Punctures flat, very dense around the eyes and on the frons, intervening spaces smaller than punctures. Vertex is much more sparsely and finely punctured, smooth and shiny. Pubescence yellowish, fine and long, sparse. Antennae slender, in both sexes reaching the postbasal transverse impression of the elytra. Second antennomere in male 1/5 shorter than the next one. Antennomeres 3-7 elongate and slender. Antennomeres 8-10 slightly shortened, of which 9-10 are thickened distally. Terminal antennomere asymmetric, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere

somewhat axeform. Pronotum broadly rounded anteriorly, significantly narrower than the head, strongly narrowed postmedium laterally toward narrow base. Very densely and confusedly punctured on disc, intervening spaces much smaller than punctures. Antero-lateral margins smooth, covered with numerous but much finer punctures. Pubescence yellowish, fine, long and dense, appressed, with separate long erect tactile setae on the sides and on the disc. Scutellum narrowly triangular, pointed apically. Elytra elongate and slightly widened across middle, smooth dorsally. Humeri rounded. Postbasal transverse impression feeble but visible. Punctures large, getting smaller in apical third. Intervening spaces ranging from smaller than the punctures to slightly larger than the punctures. Pubescence yellowish, long and dense, suberect, with numerous very long erect to suberect tactile setae present on the disc. Undersetae directed obliquely laterally. Sutural striae broad, completely developed. Hind wings fully developed. Legs long and slender. Protibiae slightly thickened in both sexes, with very feeble excavation on inner distal part in the male. Female metatibiae thickened compared to slender male tibiae. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Male basal tarsomere of metathoracic legs distinctly thickened. Morphological tergite VII in male is short, trapezoid, truncate on apical margin (Fig. 10). Morphological sternite VII in male is short, very broadly rounded on apical margin. Male aedeagus has a pointed tegmen, which is setose preapically (Figs 12-13). Morphological tergite VII in female is narrowly rounded and with long setation on apical margin (Fig. 14). Morphological sternite VII in female is broadly rounded with very short median projection (Fig. 15).

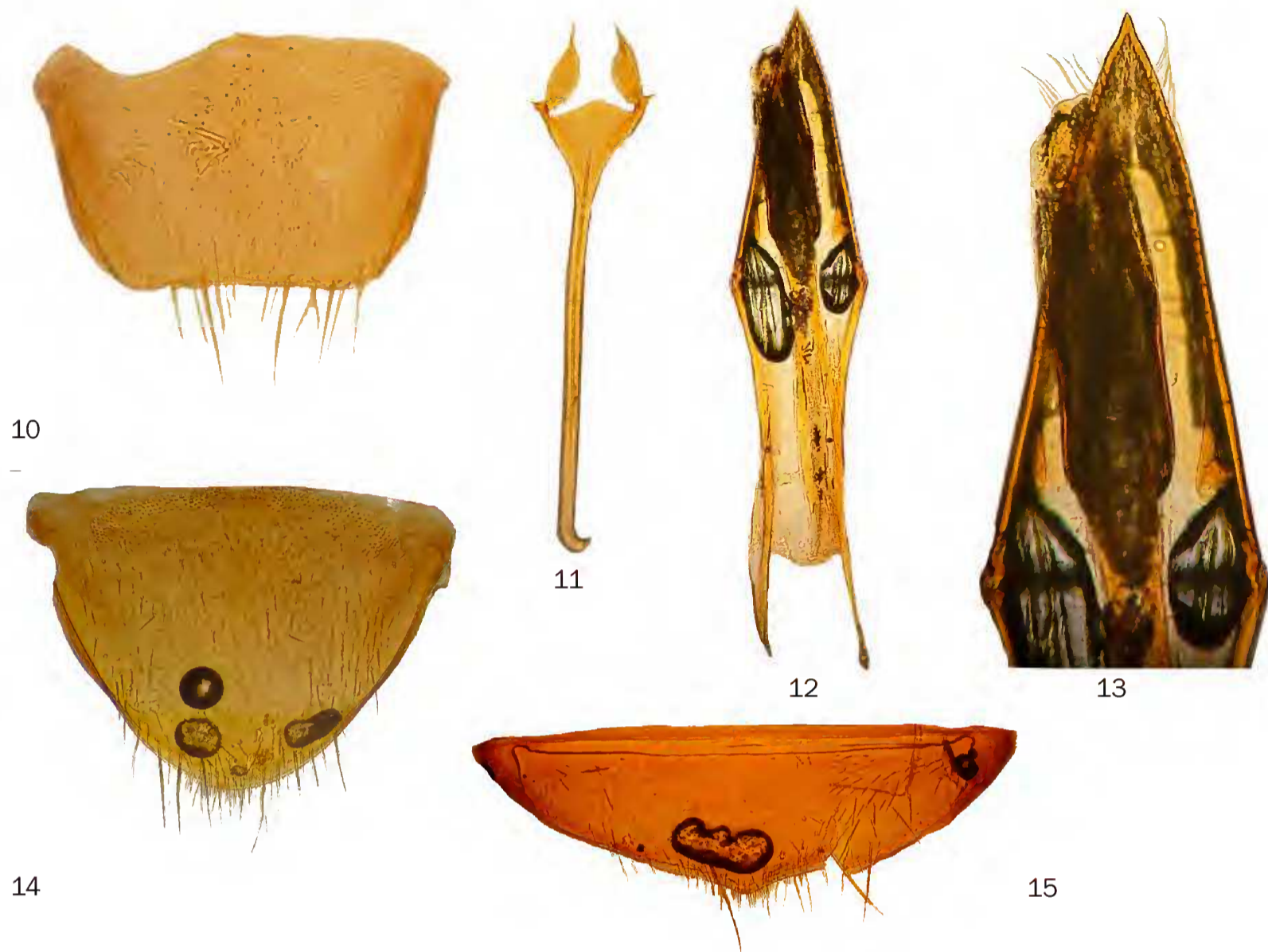
Sexual dimorphism: Metatibiae thickened in female. Protibiae in male with feeble excavation on inner distal margin.

Variability: The size and shape of the pale elytral markings vary. The specimens vary in body length from 2.50 to 2.95 mm.

Ecology & biology: The specimens were collected in both primary and disturbed lowland rainforest, and in sago swamps, from green leaves and dead thin branches.

Differential diagnosis: *Sapintus celeripes* is close to *S. geminus* sp. nov. (described below; Papua New Guinea: Madang Province) and *S. horvathi* (Pic, 1902) (New Guinea & Central Moluccas). The tegmen of the aedeagus is narrowly pointed in new species and not spatulate like in *S. geminus*,





Figures 10-15. *Sapintus celeripes* sp. nov. 10-13: Holotype ♂, 10 - Tergite VII; 11 - Spiculum gastrale; 12 - Aedeagus; 13 - Tegmen of aedeagus. 14-15: Paratype ♀. 14 - Tergite VII; 15 - Sternite VII.

or broadly and shortly pointed like in *S. horvathi*. It is especially close to *S. malut* sp. nov. (described below; North Moluccas), but differing in the tegmen of the aedeagus, setose preapically (without pubescence in *S. malut*).

Distribution: This species is known from the southern part of Bird's Neck isthmus and the eastern (lowland) part of Salawati Island (Raja Ampat Islands).

***Sapintus* (s. str.) *curvitibia* sp. nov.** (Figs 16-22, map 6, plate 45 figs 5-6)

Holotype ♂ BMNH: at light [printed] / SOLOMON ISLANDS: San Cristoval, S. Wainoni. 25.vii.65 P.N. Lawrence. B.M.1966-1. [printed].

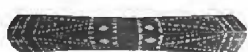
Paratypes 4 specimens. 1♂ & 2♀ BMNH: same labels as in holotype; 1♂ BMNH: Black light [printed] / SOLOMON ISLANDS San Cristoval, camp 2,150'. 28.vii.65. Ros. Soc. Exped. B.M.1966-1. [printed].

Derivatio nominis: Named from the Latin 'curvus' [curved, bent] + 'tibia' [tibia], because of the modified male metatibiae.

Measurements, holotype ♂: Total body length

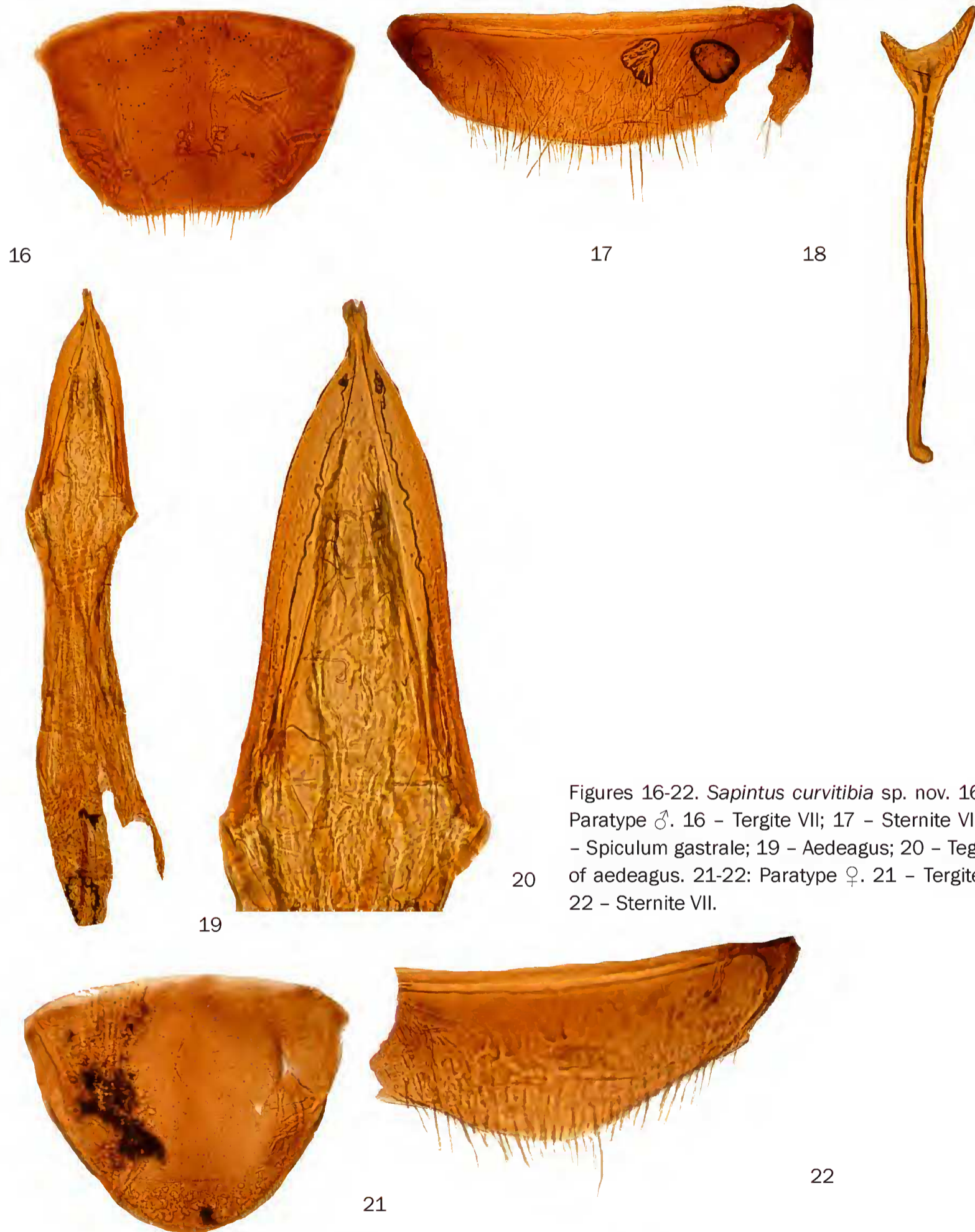
3.30 mm, maximum combined width immediately postmedium of elytra 1.08 mm. Head 0.60 mm long, across the eyes 0.67 mm broad, pronotum 0.60 mm long, maximum width 0.52 mm, elytra 2.10 mm long, 1.08 mm broad. Measurements, paratype ♀: Total body length 3.57 mm, maximum combined width immediately postmedium of elytra 1.05 mm. Head 0.66 mm long, across the eyes 0.67 mm broad, pronotum 0.57 mm long, maximum width 0.52 mm, elytra 1.95 mm long, 1.05 mm broad.

Description: Head black, pronotum reddish-black to black, elytra black with orange markings in form of broad postbasal transverse band more or less narrowly interrupted on suture and narrow oblique preapical spot on each elytron. Anterior pale band in holotype occupies almost the whole of the basal third, leaving only humeri narrowly black. Anterior pale marking bearing or not bearing lateral margin, posterior spot not bearing lateral margin. Antennae brown, 1-3 basal antennomeres yellow. Palpi yellow. Femora yellow, tibiae completely or partly darkened. Thorax orange or brown, abdominal ventrites black-brown, coxae and trochanters yellow. Head smooth



and shiny dorsally, with very large prominent eyes. Tempora much shorter than the eye length, with rounded temporal angles. Base truncate. Punctures large and dense but flat, intervening spaces smaller than punctures. Pubescence whitish, long and dense. Antennae long and slender, in male reaching the feeble postbasal transverse impression of the elytra. Second antennomere 1/3 short-

er than the next one. Antennomeres 3-9 elongate and slender, slightly thickened distally. Penultimate antennomere indistinctly shortened and thickened. Terminal antennomere elongate, pointed, 1/3 longer than the penultimate one. Terminal maxillary palpomere broadly cultriform. Pronotum smooth and shiny dorsally, rounded anteriorly, significantly narrower than the head, with shallow longitudinal



Figures 16-22. *Sapintus curvitibia* sp. nov. 16-20: Paratype ♂. 16 - Tergite VII; 17 - Sternite VII; 18 - Spiculum gastrale; 19 - Aedeagus; 20 - Tegmen of aedeagus. 21-22: Paratype ♀. 21 - Tergite VII; 22 - Sternite VII.



impression on disc near anterior margin [very indistinct in some paratypes]. Postmedium strongly converged on sides toward narrow base. Punctures large, dense and coarse on disc, especially in basal half. Intervening spaces irregular but all much smaller than punctures. Antero-lateral angles smooth, almost impunctured. Pubescence whitish, fine, long and dense, suberect, with separate long erect setae on sides and disc. Scutellum triangular, pointed apically. Elytra elongate, weakly widened on sides postmedium, dorsally smooth and partly shiny. Postbasal transverse impression flat but quite well defined. Punctures very large, dense and coarse in basal half, intervening spaces irregular in size, smaller or much smaller than punctures. In apical fourth, punctures getting less coarse, but not much sparser. Pubescence yellowish, long and dense, suberect. Undersetae developed in apical 2/3 of elytral length, directed almost perpendicularly to lateral margin. Sutural striae broad, developed from apices toward postbasal transverse impression. Hind wings fully developed. Legs very long and slender. Male metatibiae slightly curved. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male is trapezoid, truncate on apical margin (Fig. 16). Morphological sternite VII in male is very short, very broadly rounded on apical margin (Fig. 17). The tegmen of the male aedeagus has a short and narrow, pointed apex (Figs 19-20). Morphological tergite VII in female is broadly rounded on apical margin (Fig. 21). Morphological sternite VII in female is broadly rounded on apical margin (Fig. 22).

Sexual dimorphism: Female metatibiae not or indistinctly curved, legs generally comparatively shorter. Antennae shorter and more stout in the female, antennomeres 3-9 less slender and more thickened distally.

Ecology & biology: The specimens were attracted to light. One paratypic specimen was collected at an altitude of 655 m.

Differential diagnosis: This species is very distinctive due to the shape of the pronotum (very strongly constricted laterally postmedium), slightly curved male metatibiae, very long male antennae and an appearance of shallow longitudinal impression on the anterior part of the pronotal disc.

Distribution: This species is only known from San Cristobal (= San Cristoval, = Makira), the easternmost main island of Solomon Archipelago.

***Sapintus* (s. str.) *densepunctatus* sp. nov.** (Figs 23-27, map 3, plate 61 figs 1-2)

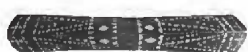
Holotype ♂ NME: INDONESIA Irian Jaya Nabire 100km W Yeretua Wondowoi Mts. VIII.1998 leg. M. Balke 100m üNN.

Paratype 1♂ NME: INDONESIA, Irian Jaya Nabire distr., Wondiwol Mts., Yeretua IX.1998, 100 m NN leg. M. Balke.

Derivatio nominis: Named from a combination of the Latin 'dense' [densely, tightly] + 'punctatus' [punctate], because of the very densely punctured dorsal surface of the forebody.

Measurements, male: Total body length 3.24 mm, maximum combined width across the middle of elytra 1.07 mm. Head 0.60 mm long, across the eyes 0.66 mm broad, pronotum 0.70 mm long, maximum width 0.56 mm, elytra 1.94 mm long, 1.06 mm broad.

Description: Dorsum black, basal collar of pronotum yellowish brown, with two pairs of yellow spots on each elytron. Anterior spots somewhat oblique, situated in the basal third, not bearing lateral margin nor suture. Posterior spot pair irregular, ovoid, situated in apical third, also not bearing lateral margin nor suture. Antennomeres 1-4(5) yellow to yellowish brown, other antennomeres darkened (brown). Palpi and legs uniformly yellow. Underside brown, pro- and mesocoxae yellow, metacoxae reddish brown. All trochanters yellow. Head smooth and shiny dorsally, densely punctured, with large prominent eyes. Tempora short, straight, about 1/3 of the eye length. Temporal angles rounded. Head base truncate or subtruncate. Punctures various in size, intervening spaces mostly smaller than punctures except along head midline and on vertex, where punctures are distinctly sparser (but not smaller). Pubescence whitish, very fine and sparse. Antennae long and slender in male, reaching base of elytra. Male second antennomere short, about half the size of the next one. Male antennomeres 3-8 short and thickened distally in the paratype, slender and longer in the holotype. Male antennomeres 9-10 stronger, thickened distally and shorter than the previous ones. Terminal antennomere slightly asymmetric, bluntly conical, indistinctly longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum stout, very densely punctured dorsally, opaque, broadly rounded anteriorly, narrower than head. Narrowed postmedium laterally toward base. Punctures very dense but flat, intervening spaces ranging from smaller to much larger than punctures. Pubescence whitish, fine, sparse and appressed, with





Figures 23-27. *Sapintus densepunctatus* sp. nov., paratype ♂. 23 – Tergite VII; 24 – Sternite VII; 25 – Spiculum gastrale; 26 – Aedeagus; 27 – Tegmen of aedeagus.

men prolongate apically, rounded (Figs 26-27).

Sexual dimorphism: Female is unknown.

Ecology & biology: This species was collected in pristine lowland rainforest at an altitude of 100 m.

Differential diagnosis: This species is very close to *S. dyaulensis* Telnov (see nomen novum below) from New Guinea and the Bismarck Archipelago, but differs in the finely punctured forebody and the less prolongate tegmen apex of the male aedeagus. Also very similar to widespread and variable *S. vexator* Werner (Central and southern Pacific, Papuan region, coastal SE Asia, Sri Lanka). First, the basal piece of the aedeagus is longer in *S. vexator* (longer than the tegmen) and shorter in *S. densepunctatus* (shorter than or as long as the tegmen). Second, the hooks at the base of the tegmen are much less developed and less sclerotized in *S. densepunctatus* than in *S. vexator*. Third, the dorsal intervening spaces on the head are not microreticulate in *S. densepunctatus*, but are almost always microreticulate in *S. vexator* (these characteristics given confusedly by Werner (1964: 264-265): first as ‘... intervals finely but distinctly microreticulate throughout’ (p. 264, description), than as ‘... often microreticulate intervals ...’ (p. 265, diagnose). In all the *S. vexator* specimens I’ve examined, the intervening spaces on the head were at least partly microreticulate.

Distribution: The species is known from the surroundings of Nabire in the northern Bird’s Neck isthmus of New Guinea.

Remarks: The correct spelling of the collecting locality is Wondowoi Mountains and not ‘Wondiwoi’,

several long erect tactile setae on the sides and on the disc. Scutellum broadly rounded apically. Elytra elongate, smooth dorsally. Punctures large, coarse and dense, getting smaller and flat but not much sparser in apical third. Intervening spaces irregular but all smaller than punctures. Pubescence yellowish, fine, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae visible from apices toward basal third. Hind wings fully developed. Frontal margins of mesepisterna with a fringe of long setae directed upwards; these setae are exposed from under the humeri in the dorsal view. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male broadly trapezoid, truncate on apical margin (Fig. 23). Morphological sternite VII in male is short and broad, truncate on apical margin (Fig. 24). Male aedeagus with teg-



as is written on the paratype's label.

Sapintus (s. str.) ***dilensis*** (Pic, 1900) (Figs 28-34, maps 2 & 4 [partial distribution], plates 47, 55 figs 6-7)

= *Anthicus dilensis* var. *Csikii* Pic, 1902

= *Sapintus relatus* Bonadona, 1981 [consider new synonymy above]

Lectotype ♀ MSNG [herewith designated]: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / Typus [printed, label red, black border] / *dilensis* Pic [handwritten, black border] / *A. dilensis* Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Paralectotype 1 specimen MNHN [herewith designated]: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / TYPE [printed, label red] / *A. dilensis* Pic [handwritten].

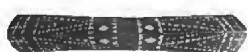
Holotype ♀ *Anthicus dilensis* var. *Csikii* HMNH: N. Guinea Biró 96 [printed] / Erima Astrolabe B. [printed] / Holotypus [printed, text red] 1902 *Anthicus Csikii* Pic [handwritten, red border] / *A. dilensis* Pic var [handwritten] / *Csikii* Pic [handwritten] / *Anthicus Csikii* Pic [handwritten] det.M. Pic [printed] Typus ! [handwritten, text red].

Paratypes 2 specimens *Anthicus dilensis* var. *Csikii*: 1♂ HMNH: N. Guinea Biró 97. [printed] / Erima Astrolabe B. [printed] / Paratypus [printed, text red] 1902 *Anthicus Csikii* Pic [handwritten, red border] / *dilensis* var *Csikii* Pic [handwritten]; 1 specimen DCC: N. Guinea Biró 96 [printed] / Friedrich-Wilh.-hafen [printed] / 3104 [printed] / Paratypus [printed, label red] 1902 *Anthicus Csikii* Pic [handwritten, red border].

Holotype ♂ *Sapintus relatus* ZMUC: Bismarck Islands, Lavongai, Banatam 21. March 1962 Noona Dan Exp. 61-62 [printed] / HOLOTYPE [printed, label red] / *Sapintus relatus* n.sp [handwritten] P.Bonadona dét. 19[printed] 78 [handwritten].

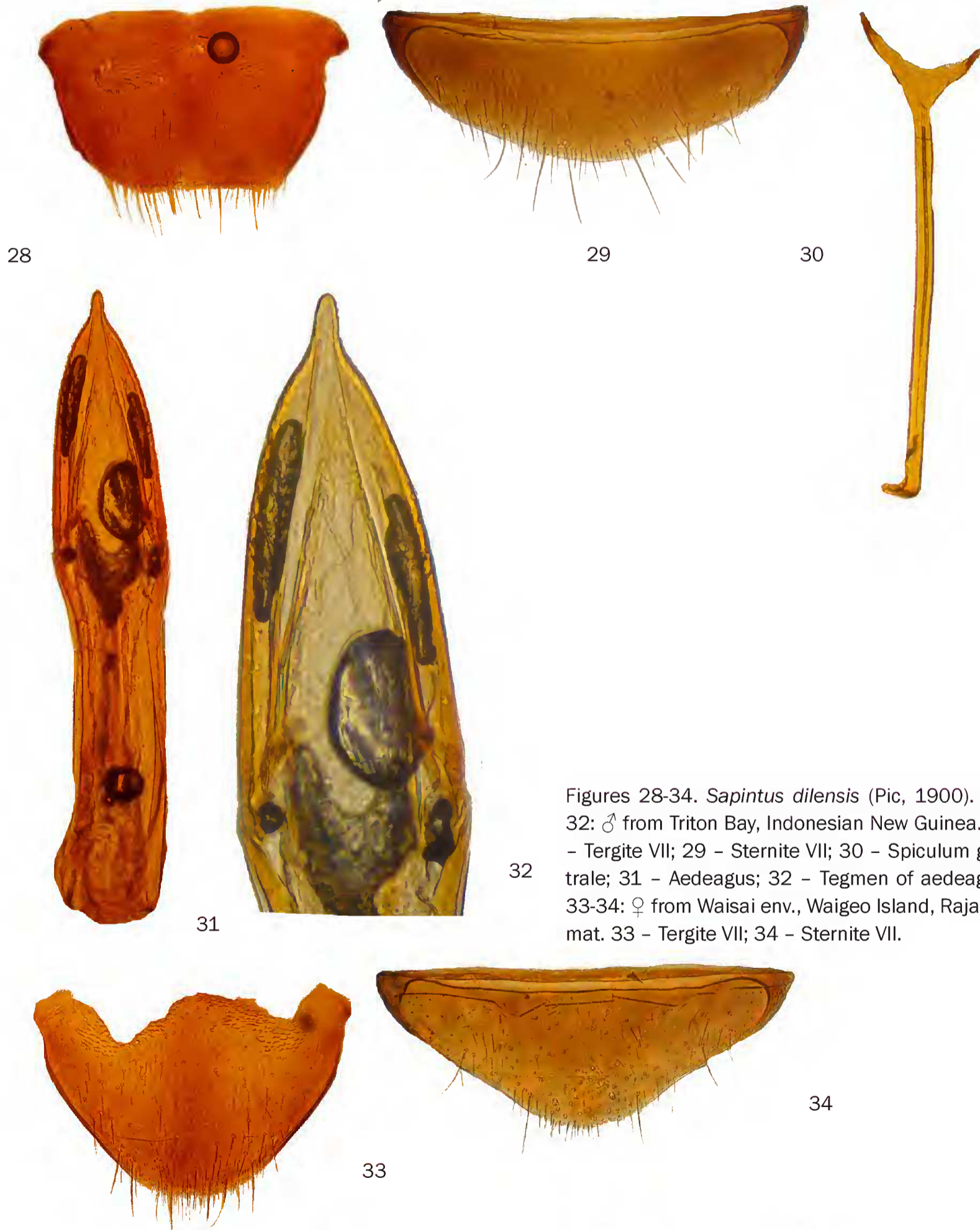
Additional material: 1 specimen OUNH: N. Gui Wallace / Coll.(1830-73) WWSaunders Ex coll.H.E. Cox. dd.1916 Mrs.Cox / Hope Entomological Collection Ex. Cabinet 6, drw 9; 1 specimen MNHN: N. Guinea Biró 96 / Friedrich-Wilh.-hafen / **3106**; 1 specimen MNHN: N. Guinea Biró 1898 / Stephansort Astrolabe Bai [sic!] / **3105** / *Ant. dilensis* Pic var. / *Csikii* Pic; 2 specimens BMNH: Stn. No. 116. / NEW GUINEA: Morobe Dist., Lae. 10.xii. 1964 / M.E. Bacchus. B.M. 1965-120; 5 specimens ZSM: 30 IX 79 PNG/Morobe Umg. Kaiapit / *Sapintus dilensis* (Pic) det.G.Uhmann 1989; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light Misc 8 10-III-1993 Leg Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light M1 18-III-1993 Leg Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light XG 25-IV-1996 Leg

Olivier Missa; 1 specimen DTC: Coll. I.R.Sc.N.B. Canopy mission P.N.G. Madang province Baileta, LIGHT AR 14 4.V.1996 Leg. Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light M1 3-VI-1996 Leg Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. Canopy mission P.N.G. Madang province Baileta, Light AR22 12.VI.1996 Leg. Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light X P 18-IV-1996 Leg Olivier Missa; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light AR 60 03-VII-1996 Leg Olivier Missa; 1 specimen NME, 1 specimen DTC: INDONESIA, Irian Jaya Jayapura distr. Genyem, 50m NN; IV.-V.1999, leg. M. Balke; 3 specimens NME, 1 specimen DTC: PNG: E New Britain Prov. 30km SW Kokopo, Arabam, 200m 04°35'75"S 152°06'84"E 21.II.-04. III.2000 leg. A. Weigel KL; 1 specimen NME: PNG: E New Britain Prov. 30km SW Kokopo, Arabam, 200m 04°35'75"S 152°06'84"E 21.II.2000 leg. A. Weigel Dorf LF; 1 specimen NME: PAPUA - NEUGUINEA E New Britain Prov. 30km SW Kokopo vic. Arabam, S, 200m, S 04°35'75", E 152°06'64" 25.II.2000, KL, leg. A. Weigel, sec. forest; 1 specimen NME: W-PAPUA Raja Ampat Prov. Batanta Isl. mer., Wallebet 0°54'01"S, 130°39'37"E, 18.-21.I.2004 leg. A. Skale; 1 specimen NME, 46 specimens NME & DTC: W-PAPUA, Manokwari Pr., 14km NE Ransiki Warbiati (Oransbari) / light trap, 01°18.41'S 134°14.24'E, cut.area 02.III.2007 leg. A. Weigel; 1 specimen NME: W-PAPUA Manokwari Prov. Ransiki, Motel, 01°30.37'S 134°10.27'E, 02.III.2007 leg. A. Skale at light; 1 specimen DTC: W-PAPUA Manokwari Prov. 6km N Manokwari, Desa Pami, 180m 0°48.34'S, 134°03.15'E 09.III.2007, leg. A. Skale; 6 specimens DTC: **INDONESIA**, prov. Maluku Utara (North Moluccas), Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 09.IX.2007, plantations, UV light, leg. D. Telnov & K. Greke; 1 specimen DTC: **INDONESIA**, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. S env., Tilope vill. 15-18 km SW, Oham, 0°14'46,74"N 127°52'38,19"E, ~150 m, 13-14.IX.2007, primary lowland forest, UV light, leg. D. Telnov & K. Greke; 2 specimens DTC: **INDONESIA**, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Wairoro vill. ~10 km W, Gunung Benteng mt. ridge, 0°12'20,19"N 127°48'44,87"E, 150-450 m, 18-20.IX.2007, primary rain forest, river valley, UV light, leg. D. Telnov & K. Greke; 7 specimens DTC: **INDONESIA**, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Wairoro vill. ~10 km W, Gunung Benteng mt. ridge, 0°12'20,19"N 127°48'44,87"E, 150-450 m, 19.IX.2007, primary rain forest, small



clearing, beaten, leg. D.Telnov & K.Greke; 1 specimen DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3° 46' 42" S, 134° 10' 24" E, 50 m, 07.IX.2010, edge of primeval lowland rainforest on limestone, UV light, leg. D.Telnov; 5 specimens DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3° 46' 42" S, 134° 10' 24" E, 50 m, 08.IX.2010, edge of primeval lowland rainforest, white

light, leg. D.Telnov; 10 specimens DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3° 46' 42" S, 134° 10' 24" E, 50 m, 09.IX.2010, edge of primeval lowland rainforest, white light, leg. D.Telnov; 3 specimens DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3° 46' 42" S, 134° 10' 24" E, 50 m, 09.IX.2010, edge of primeval lowland rainforest, white light, leg. M.Kalniņš; 13 specimens DTC: **INDO-**



Figures 28-34. *Sapintus dilensis* (Pic, 1900). 28-32: ♂ from Triton Bay, Indonesian New Guinea. 28 - Tergite VII; 29 - Sternite VII; 30 - Spiculum gastrale; 31 - Aedeagus; 32 - Tegmen of aedeagus. 33-34: ♀ from Waisai env., Waigeo Island, Raja Ampat. 33 - Tergite VII; 34 - Sternite VII.

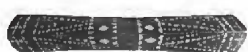
NESIA E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3°46'42"S, 134°10'24"E, 50 m, 10.IX.2010, edge of primeval lowland rainforest, white light, leg. D.Telnov; 7 specimens DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 47 km E, Triton Bay, Kamaka (former Warika) vill., 3°46'42"S, 134°10'24"E, 50 m, 10.IX.2010, edge of primeval lowland rainforest, white light, leg. M.Kalniņš; 1 specimen DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 40 km E, Triton Bay, Lobo vill. & env., 3°45'33"S, 134°06'11"E, 15 m, 12.IX.2010, secondary rainforest & gardens on limestone, white light, leg. M.Kalniņš; 1 specimen DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 40 km E, Triton Bay, Lobo vill. & env., 3°45'33"S, 134°06'11"E, 15 m, 14.IX.2010, secondary rainforest & gardens on limestone, white light, leg. D.Telnov; 2 specimens DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 40 km E, Triton Bay, Lobo vill. & env., 3°45'42"S, 134°05'40"E, 15 m, 15.IX.2010, secondary rainforest on limestone, UV light, leg. D.Telnov; 1 specimen DTC: **INDONESIA** E, West PAPUA, S Bird's Neck, Kaimana 40 km E, Triton Bay, Lobo vill. & env., 3°45'33"S, 134°06'11"E, 15 m, 16.IX.2010, secondary rainforest & gardens on limestone, white light, leg. D.Telnov; 2 specimens DTC: **INDONESIA** E, Raja Ampat, Waigeo Island, Waisai 2-3 km W, 00°25'40"S, 130°47'36"E, ~70 m, 16-17.II.2012, secondary lowland rainforest on limestone, MV light, leg. D.Telnov; 25 specimens DTC: **INDONESIA** E, Raja Ampat, Waigeo Island, Waisai 3 km W, 00°26'04"S, 130°47'41"E, 40-50 m, 18.II.2012, secondary lowland rainforest on limestone & clearing, MV light, leg. D.Telnov; 32 specimens DTC: **INDONESIA** E, Raja Ampat, Waigeo Island, Waisai 3 km W, 00°26'04"S, 130°47'41"E, 40-50 m, 20.II.2012, secondary lowland rainforest on limestone & clearing, MV light, leg. D.Telnov.

This redescription is based on a male specimen from Waigeo Island, Raja Ampat, Indonesia.

Measurements, lectotype ♀: Total body length 2.75 mm, maximum combined width across the middle of elytra 0.86 mm. Head 0.54 mm long, across the eyes 0.60 mm broad, pronotum 0.50 mm long, maximum width 0.51 mm, elytra 1.71 mm long, 0.86 mm broad. Holotype ♀ *Anthicus dilensis* var. *Csikii*: Total body length 2.49 mm, maximum combined width across the middle of elytra 0.81 mm. Head 0.50 mm long, across the eyes 0.55 mm broad, pronotum 0.48 mm long, maximum width 0.46 mm, elytra 1.51 mm long, 0.81 mm broad. ♂ from Manokwari surroundings, Indonesian New Guinea: Total body length 2.75 mm, maximum combined width across the middle of elytra 0.90 mm. Head 0.60 mm long, across the eyes 0.60 mm

broad, pronotum 0.50 mm long, maximum width 0.47 mm, elytra 1.65 mm long, 0.90 mm broad.

Description: Forebody brown, dark reddish brown or black. Elytra black with yellow or orange markings consisting of a broad postbasal transverse band and narrower oblique ^-shaped transverse band in the apical third. The anterior band is usually complete while the posterior one is often narrowly interrupted on the suture. Antennae pale – yellowish or orange; in some specimens only the basal antennomeres 1-4 are pale, while the rest are darkened. Maxillary palpi yellow. Legs yellow or black, with partly yellow tibiae. Underside uniformly brown, reddish brown or black-brown, pro- and mesocoxae and all trochanters pale. Head smooth and somewhat shiny, with midsized prominent eyes. Tempora about a half of the eye length, with rounded temporal angles. Head base truncate. Punctures of two sizes: basic punctures large and flat with intervening spaces equal to or twice as large as punctures. Especially on the frons, intervening spaces between large punctures covered by small and dense punctures. Vertex sparsely punctured, more shiny. Pubescence fine, yellowish, quite long and dense. Antennae long, almost reaching the middle of the elytra in the female. Second antennomere about 1/3 shorter than the next one. Antennomeres 3-7 elongate, slightly thickened distally. Antennomeres 8-10 shorter and stronger, thickened distally. Terminal antennomere asymmetric, elongate, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum dorsally not or partly smooth, flattened, broadly rounded anteriorly, narrower than the head. Strongly narrowed postmedium laterally toward narrow base. Punctures of two sizes: larger ones mostly present on anterior half and with intervening spaces ranging from smaller than to as large as these punctures. Between larger punctures, and especially in the basal half, there are dense, much smaller punctures, which get extremely dense at the base, to the extent of almost not leaving visible spaces in between. Punctures less dense on antero-lateral margins. Pubescence yellowish, fine, dense and long, with numerous long erect tactile setae on the sides and on the disc. Scutellum narrowly truncate apically. Elytra elongate, smooth and shiny. Punctures large and dense in basal half, getting smaller and sparser postmedially. Intervening spaces irregular, in basal half mostly smaller, in postmedian half 2-3 times larger than punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae almost complete, visible from basal fourth to-



ward apices. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male truncate (rarely feebly excavate) and densely setose on apical margin (Fig. 28). Morphological sternite VII in male broadly rounded and densely setose on apical margin (Fig. 29). Male aedeagus with elongate and apically rounded apex, basal piece slightly longer than parameres (Figs 31-32). Morphological tergite VII in female broadly rounded on apical margin (Fig. 33). Morphological sternite in female broadly rounded on apical margin (Fig. 34).

Sexual dimorphism: Not indicated, but the antennomeres are comparatively shorter in females.

Variability: This species is variable in body length and colouration. Certain specimens are completely black coloured with pale markings on the elytra. Other specimens have a pale orange forebody and a brown elytra (with markings). Elytral markings can be yellow, orange or orange-red. The posterior pale band of the elytra can be more or less broadly interrupted on the suture. Leg colour varies from black to yellow, and the coxae and trochanters can be darkened in some specimens. Body size varies 2.40 - 2.80 mm.

Distribution: This species is widespread in the Indo-Australian transition zone but was not yet recorded outside this region. Hitherto confirmed from North (Halmahera Island), Raja Ampat Islands (Batanta & Waigeo islands), Indonesian Papua (Bird's Head Peninsula & northern coast of Bird's Neck isthmus), Papua New Guinea (Papuan Peninsula, Madang & Morobe Provinces), and Bismarck Archipelago (Lavongai & New Britain islands).

Sapintus (s. str.) **dyaulensis** Telnov (Figs 35-36, maps 2-3, plate 61 figs 3-5)

= *Sapintus propinquus* Bonadona, 1981 [consider name change above]

Holotype ♂ ZMUC: Bismarck Isl. Dyaul Sumuna 4. March 1962 Noona Dan Exp. 61-62 [printed] / Caught by Mercury - light [printed] / HOLOTYPE [printed, label red] / *Sapintus propinquus* n.sp [handwritten] P.Bonadona dét. 19[printed] 78 [handwritten].

Additional material: 1 specimen NME: Indonesia, Irian Jaya, Nabire 100 km W Yeretua, Wondowoi Mts., VII.1998, leg. M.Balke, 100 m üNN.

This redescription is based on a male specimen from the Nabire surroundings, Indonesian New Guinea.

Measurements, ♂ from Nabire surroundings, In-

donesian Papua: Total body length 3.51 mm, maximum combined width postmedium of elytra 1.20 mm. Head 0.67 mm long, across the eyes 0.71 mm broad, pronotum 0.67 mm long, maximum width 0.61 mm, elytra 2.17 mm long, 1.20 mm broad.

Description: Dorsal surface dark brown. Elytra with pale markings, consisting of one postbasal and one preapical yellowish transverse or oblique spot on each elytron, distinctly interrupted on the suture and also not reaching lateral margins. Spots vary in size and form, the anterior pair is almost completely reduced in the specimen from the Nabire surroundings. Two basal antennomeres yellow, the rest of the antennae pale brown. Legs yellow with basal half of all tibiae darkened. Head smooth dorsally on intervening spaces, with very large prominent eyes occupying almost the whole sides of the head. Tempora about 1/4 of the eye length, with rounded temporal angles. Head base truncate. Punctures large and deep, intervening spaces smooth and smaller than punctures. Vertex is not much more sparsely punctured than the frons. Pubescence whitish, fine and long, dense. Antennae comparatively short and slender, reaching over the base of the elytra in the male. Second antennomere in male short, half the size or less of the third antennomere. Antennomeres 3-7 elongate and slender [three ultimate antennomeres missing in the Nabire specimen and also not described in detail by Bonadona (1981)]. Terminal maxillary palpomere axiform. Pronotum smooth dorsally on intervening spaces, rounded anteriorly, significantly narrower than the head, with a distinct lateral postmedian transverse impression. Punctures generally larger and denser than on the head, dense and coarse, intervening spaces much smaller than punctures. Pubescence whitish, fine, dense and long, with separate long erect tactile setae on the sides and on the disc. Scutellum truncate apically. Elytra elongate, smooth and shiny. Punctures large and dense in basal half, getting smaller and sparser postmedium. Intervening spaces irregular in size - ranging from smaller than the punctures in the basal half to as large as those in the postmedian half. Pubescence whitish, long but not very dense, appressed. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Male aedeagus long, tegmen strongly elongated to the apex, finely setose laterally preapically (Figs 35-36) [last ventrites were not available for this study]. Sexual dimorphism: Female is unknown.





35 36
Figures 35-36. *Sapintus dyaulensis* nom. nov. ♂ from Nabire env., Indonesian New Guinea. 35 - Aedeagus; 36 - Tegmen of aedeagus.

Ecology & biology: Collected at altitudes of ~100 m.

Distribution: The species is possibly widespread on New Guinea. Hitherto known from Dyaul Island (also known as Djaul) in the Bismarck Archipelago and from the Nabire area (northern Bird's Neck isthmus, Indonesian New Guinea).

***Sapintus* (s. str.) *geminus* sp. nov.** (Figs 37-43, map 3, plate 46 figs 5-6)

Holotype ♂ IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Madang Province Baiteta-LICHT AR T2 24 III 1993 Leg. Olivier Missa [printed, label orange].

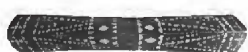
Paratype 1♀ IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baiteta Light AR 16 04-VI-1996 Leg Olivier Missa [printed, label orange].

Derivatio nominis: Named from the Latin 'geminus' [very similar, twin], because of outstanding morphological similarity with the Papuan *Sapintus horvathi* (Pic, 1902).

Measurements, holotype ♂: Total body length 2.80 mm, maximum combined width across the middle of elytra 0.80 mm. Head 0.62 mm long, across the eyes 0.57 mm broad, pronotum 0.64 mm long, maximum width 0.47 mm, elytra 1.50

mm long, 0.80 mm broad. Measurements, paratype ♀: Total body length 2.55 mm, maximum combined width across the middle of elytra 0.78 mm. Head 0.60 mm long, across the eyes 0.52 mm broad, pronotum 0.50 mm long, maximum width 0.41 mm, elytra 1.42 mm long, 0.78 mm broad.

Description: Head brown, mouth parts yellow. Pronotum brown, paler on base. Elytra black or black-brown with pale markings. These markings consist of a yellow postbasal transverse band and a transverse spot in the apical third of each elytron, not bearing their lateral margin. Antennae brown, 3-4 terminal antennomeres slightly paler. Legs brown, all male femora and female mesofemora yellow in basal part. Underside reddish-brown or brown, trochanters and coxae generally paler. Head smooth and shiny, with midsized prominent eyes. Tempora slightly shorter than the eye length, very broadly rounded on temporal angles together with base. Punctures deep and dense, intervening spaces smaller than punctures. The vertex is much more sparsely and finely punctured than the frons. Pubescence yellowish, fine and long. Antennae long and slender, reaching slightly over the elytral humeri in the male. Second antennomere in male 1/5 shorter than the next one. Antennomeres 3-8 elongate and slender. Antennomeres 8-10 slightly shortened and thickened distally. Terminal antennomere asymmetric, conical, pointed, 1/3 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum broadly rounded anteriorly, significantly narrower than the head, strongly constricted postmedium laterally toward narrow base. Very densely punctured on the disc, with punctures becoming very large and coarse in the basal half. Intervening spaces ranging from smaller to much smaller than punctures. Antero-lateral margins smooth, minutely and sparsely punctate. Pubescence yellowish, fine, long and sparse, appressed, with separate very long erect tactile setae on the sides and on the disc. Scutellum narrowly elongate, rounded apically. Elytra elongate and slightly widened across the middle, smooth dorsally. Humeri rounded. Feeble but distinct postbasal transverse impression present. Punctures variable in size, sparse, getting smaller in the apical third. Intervening spaces irregular in size, ranging from as large to twice as large as the punctures. Pubescence yellowish, long and sparse, suberect. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward postbasal transverse impression. Hind wings fully developed. Legs long and slender. Male metatibiae slightly thickened. Male basal tarsomere of



the metathoracic legs is longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male is trapezoid, truncate on apical margin and covered with long setation (Fig. 37). Morphological sternite VII in male is short, broadly rounded on apical margin and covered with long setation (Fig. 38). The male aedeagus has a spatulate tegmen, which is pubescent preapically (Figs 40-41). Morphological tergite

VII in female broadly rounded on apical margin (Fig. 42). Morphological sternite VII in female short and broad, broadly rounded and densely setose on apical margin (Fig. 43).

Sexual dimorphism: The metatibiae are slender in the female and the tempora are comparatively shorter.

Variability: The forebody is less coarse and densely punctured in the female, except for the basal half



Figures 37-43. *Sapintus geminus* sp. nov. 37-41: Holotype ♂. 37 - Tergite VII; 38 - Sternite VII; 39 - Spiculum gastrale; 40 - Aedeagus; 41 - Tegmen of aedeagus. 42-43: Paratype ♀. 42 - Tergite VII; 43 - Sternite VII.



of the pronotum. The posterior pale spots of the elytra are very narrow (strongly transverse) in the female. The femora are darker in the female (basal yellow colouration reduced).

Ecology & biology: This species is very close to *S. horvathi* (Pic, 1902) (New Guinea & Central Moluccas) and is distinctive because of the shape of the male tegmen (not pointed apically, opposite pointed in *S. horvathi*) and comparatively longer tempora and broadly rounded head base (tempora are shorter in *S. horvathi* and the head base is generally less broadly rounded). Moreover, the antennae are somewhat shorter in the new species, not reaching the postbasal transverse impression of the elytra.

Distribution: This species is known from the eastern edge of Adelbert Range in Madang Province, Papua New Guinea.

***Sapintus* (s. str.) *gemitus* sp. nov.** (Figs 44-50, map 5, plate 48 figs 1-3)

Holotype ♂ BMNH: Vert.Series 1m actinic code: [printed] 15.III.80 [handwritten] / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281.

Paratypes 16 specimens: 1 specimen BMNH: At MV light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 1m actinic code: [printed] 14.II.80 [handwritten] / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 3 specimens BMNH: Vert.Series 1m actinic code: [printed] 15.II.80 [handwritten] / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / Vert.Series 1m actinic code: [printed] 17.II.80 [handwritten] / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / Vert.Series 1m actinic code: [printed] 18.II.80 [handwritten] / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / Vert.Series 1m actinic code: [printed] 23.II.80 [handwritten] / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 1m actinic code: [printed] 4.III.80 [handwritten] / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 3 specimens BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / Vert.Series 1m actinic code: [printed] 14.III.80 [handwritten] / S.L.Sutton C.J.Rees B.M.1980-281; 3 specimens BMNH: Vert.Series 1m actinic code: [printed] 16.III.80 [handwritten] / SULAWESI

TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 30m.actinic code: [printed] 16.III.80 [handwritten] / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / 408.

Derivatio nominis: Named from the Latin 'gemitus' [sigh, groan], in honour of all taxonomists doing the often routine work of naming and describing, *describing*, **describing** new taxa.

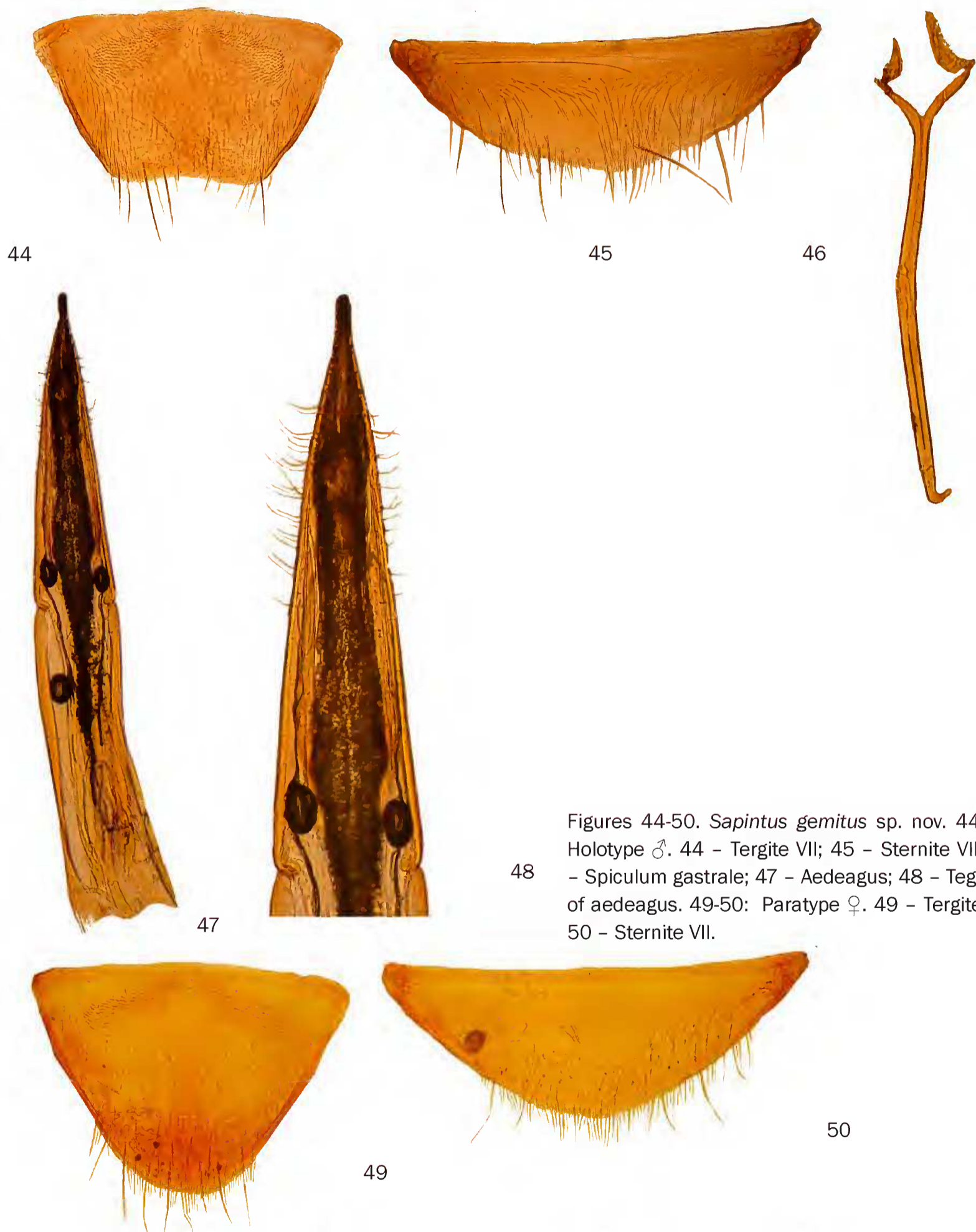
Measurements, holotype ♂: Total body length 3.51 mm, maximum combined width across the middle of elytra 1.12 mm. Head 0.71 mm long, across the eyes 0.70 mm broad, pronotum 0.65 mm long, maximum width 0.53 mm, elytra 2.15 mm long, 1.12 mm broad. Measurements, paratype ♀: Total body length 3.35 mm, maximum combined width across the middle of elytra 1.05 mm. Head 0.69 mm long, across the eyes 0.70 mm broad, pronotum 0.65 mm long, maximum width 0.51 mm, elytra 2.01 mm long, 1.05 mm broad.

Description: Dorsum red to orange-red. Elytra with black markings consisting of a small humeral spot, a large median spot (bearing or not bearing the lateral margin of the elytra) and a large apical spot. Antennae, palpi and legs pale orange to yellow, tibiae somewhat darkened basally. Underside uniformly orange-red. Head smooth and shiny, with large prominent eyes. Tempora slightly converged toward base, about half of the eye length, broadly rounded on temporal angles. Head base truncate. Punctures variable in size, deep and large but sparse, intervening spaces ranging from smaller than (on frons) to twice as large (on the vertex) as punctures. Pubescence yellowish, fine and long. Antennae long and slender, reaching the area of postbasal transverse impression of elytra in the male. Second antennomere in male half the size of the third antennomere. Antennomeres 3-10 elongate and slender; of these 9-10 are slightly shortened. Terminal antennomere elongate, conical, pointed, about as long as the penultimate one. Terminal maxillary palpomere somewhat axiform. Pronotum elongate, smooth dorsally, broadly rounded anteriorly, significantly narrower than the head, narrowed postmedium laterally toward base. Very densely and coarsely punctured on disc. Intervening spaces ranging from smaller to much smaller than punctures. Antero-lateral angles smooth, minutely and sparsely punctate. Pubescence yellowish, long and dense, with several very long erect tactile setae on the sides and on the disc. Scutellum truncate apically. Elytra elongate and slightly widened across



middle, smooth and shiny dorsally. Punctures large, deep and coarse in the basal half, getting smaller and more flat in the apical half. Intervening spaces smaller than the punctures in the basal half, getting slightly larger in the apical third. Pubescence yellowish, long and sparse, suberect. Undersetae directed obliquely laterally. Sutural striae broad, complete. Hind wings fully developed. Legs long and slender. Basal tarsomere of the metathoracic

legs in both sexes about as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in the male is trapezoid, truncate or feebly excavated on the apical margin, covered with long setae (Fig. 44). Morphological sternite VII in the male is short, broadly rounded on the apical margin and covered with long setation (Fig. 45). The male aedeagus is slender, elongate and pointed apically, with setose tegmen (Fig. 47-



Figures 44-50. *Sapintus gemitus* sp. nov. 44-48: Holotype ♂. 44 - Tergite VII; 45 - Sternite VII; 46 - Spiculum gastrale; 47 - Aedeagus; 48 - Tegmen of aedeagus. 49-50: Paratype ♀. 49 - Tergite VII; 50 - Sternite VII.



48). Morphological tergite VII in female is narrowly rounded on the apical margin (Fig. 49). Morphological sternite VII in female is broadly rounded on the apical margin (Fig. 50).

Sexual dimorphism: Almost not indicated. The intermediary antennomeres (3-8) are comparatively shorter in the female.

Variability: The punctures of dorsum are variable in size and density. The black markings of the elytra vary strongly in shape and size.

Ecology & biology: Collected in primary tropical rainforest, attracted to light.

Differential diagnosis: This species is similar to *S. subrubrocinctus* (Marseul, 1882a) (Sumatra) due to the body colouration and general appearance. The holotype of Marseul's species is a female, other identifications made by Uhmman (from Borneo, Nias, Peninsular Malaysia) need further confirmation. Consequently, I was unable to compare the male genital organs of both species. The head base is broadly rounded in *S. subrubrocinctus* (truncate in *S. gemitus*) and the Sumatran species is a bit larger (4.0 mm compared to ~3.50 mm in *S. gemitus*), otherwise the two species look very similar.

Distribution: This species is known from Central Sulawesi.

Sapintus* (s. str.) *gracilicornis (Pic, 1895) (Figs 51-65, plates 49, 50, 56 figs 5-6)

= *Anthicus gracilicornis* v. *semiobliteratus* Pic, 1900 [consider new synonymy above]

= *Anthicus neoguineensis* Pic, 1900 [consider new synonymy above]

= *Sapintus repentinus* Bonadona, 1981 [consider new synonymy above]

Holotype ♀ *Sapintus gracilicornis* MNHN: ○ [small circular purple label without text] / Balabac (Staudinger) [handwritten] / pres hirtisetosus Mars [handwritten] / Type [handwritten] / TYPE [printed, label red] / a. *gracilicornis* Pic n sp. [handwritten].

Holotype ♀ *Anthicus neoguineensis* MSNG: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / Typus [printed, text red, red border] / *neoguineensis* Pic [handwritten, black border] / *Anthicus neoguineensis* Pic typus ! [handwritten] / Mus. Civ. Genova [printed].

Lectotype ♀ *Anthicus gracilicornis* var. *semiobliteratus* MSNG [herewith designated]: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / type [handwritten] / TYPE [printed, label red] / v. *semiobliteratus* Pic [handwritten].

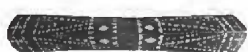
Paralectotype ♀ *Anthicus gracilicornis* var. *semiobliteratus* MNHN [herewith designated]: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] /

type [handwritten] / TYPE [printed, label red] / v. *semiobliteratus* Pic [handwritten].

Holotypus ♂ *Sapintus repentinus* ZMUC: Philippines, Tawi Tawi Tarawakan north of Batu Batu 13. Nov. 1961 Noona Dan Exp. 61-62 [printed] / HOLOTYPE [printed, label red] / *Sapintus repentinus* n.sp [handwritten] P.Bonadona dét. 19[printed] 78 [handwritten].

Paratypus ♀ *Sapintus repentinus* ZMUC: Philippines, Tawi Tawi Tarawakan north of Batu Batu 15. Nov. 1961 Noona Dan Exp. 61-62 [printed] / Caught by Mercury - light [printed] / ALLOTYPE [printed, label red] / *Sapintus repentinus* n.sp [handwritten] P.Bonadona dét. 19[printed] 78 [handwritten].

Additional material: 2 specimens MNHN: ○ [small circular purple label without text] / Balabac (Staudinger) [handwritten] / pres hirtisetosus Mars [handwritten] / a. *gracilicornis* Pic n sp. [handwritten]; 2 specimens MNHN: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border]; 27 specimens MSNG: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border]; 1 specimen DTC: S.Celebes / ♀ / 99370 / *subrubrocinctus* det. V.Krekich; 2 specimens MHUB: D. N. Guinea 96 Hauptlager b. Malu Kais. Augustafuß Exp. 3.VII.12. Bürgers S.G. / Zool. Mus. Berlin / *Sapintus gracilicornis* (Pic) det.G.Uhmman1991; 1 specimen MHUB: D. N. Guinea 97 Hauptl. b. Malu 10.-30.VI.12 Bürgers S.G. / Zool. Mus. Berlin / *Sapintus gracilicornis* (Pic) det.G.Uhmman1991; 2 specimens MHUB: D. N. Guinea 99 Kais. Augustafuß Exp. VII.12. Bürgers S.G. / Zool. Mus. Berlin / *Sapintus gracilicornis* (Pic) det.G.Uhmman1991; 1 specimen BMNH: NEW GUINEA: Papua. J.B. Jackson. B.M. 1938-496.; 2 specimens BMNH: Hollins Is. Asau, Savaii 24.xi.68 A.K.Walker / x coconut log / UN/6PC 1608 / Hocking Colln B.M. 1980-386; 2 specimens BMNH: Hollins Is. Samoa 26 XII 1968 B. Hocking SWEEP / *Anthicus oceanicus* Laf. / Hocking Colln B.M. 1980-386; 1 specimen BMNH: Vert. Series 1m.actinic code: 16.III.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Anthicidae R.J.W. Aldridge det. 1982 / 400; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / Vert.Series 1m.actinic code: 14.III.80 / S.L.Sutton C.J.Rees B.M.1980-281; 2 specimens BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / Vert.Series 1m. actinic 18.II.80 / S.L.Sutton C.J.Rees B.M.1980-281; 6 specimens BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / Vert.Series 1m. actinic code: 22.II.80 / S.L.Sutton C.J.Rees B.M.1980-281; 3 specimens BMNH: Vert. Series 1m.actinic code: 16.III.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 2 specimens BMNH: Vert.Series 1m.actinic code: 19.II.80 / SULAWESI TEN-



GAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 1m.actinic code: 28.II.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 3 specimens BMNH: Vert.Series 1m.actinic code: 10.III.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 1m.actinic code: 28.II.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Anthicidae R.J.W. Aldridge det. 1982; 1 specimen BMNH: Vert.Series 1m.actinic code: 14.II.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Anthicidae R.J.W. Aldridge det. 1982; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / Vert.Series 1m.actinic code: 23.II.80 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen BMNH: Vert.Series 1m.actinic code: 14.II.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 36 specimens BMNH: Lowland rain forest. / At light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / M.J.D.Brendell B.M.1980-280; 2 specimens BMNH: Lowland rain forest. / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / M.J.D.Brendell B.M.1980-280; 1 specimen BMNH: At light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / M.J.D.Brendell B.M.1980-280; 1 specimen BMNH: SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.I.-20.IV.1980 / M.J.D.Brendell B.M.1980-280; 2 specimens DTC: Borneo, Sarawak Niah Caves N.P. 13°46'E 3°48'N 25.4.-3.5.1981, leg. Bogenberger / Sapintus oceanicus (Laf.) det.G.Uhmann19; 1 specimen DTC: Borneo, Sarawak, Niah Caves N.P. 25.IV-3.V.1981, leg. Bogenberger 1 specimen BMNH: flood refuse / Banks of R.Tumpah / Lowland forest ca 200m. / INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P. January 1985. / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen BMNH: Site 2, 200m Toraut bank J.D.Holloway 29-31.I.1985 / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10 / INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P. January 1985. / 112.21; 1 specimen BMNH: flood refuse / Banks of R.Tumpah / Lowland forest ca 200m. / INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P. January 1985. / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 2 specimens BMNH: INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P. January 1985. / At light / Base camp area ca 190m / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 2 specimens MSNG: SULAWESI UT. Dumoga-Bone Base Camp Sweeping 18.V.1985 Franciscolo; 2 specimens DTC: PHILIPPINES,PANAY 10 KM E SIBALOM 10.DEC 1990

BOLM LGT. 100 M; 1 specimen DTC: PHILIPPINES, 150 m Palawan, PORT BARTON 14.-18.Dec 1990 Bolm lgt.; 1 specimen MHUB: Philippinen, Luzon Bicol NP., 200m 28.III.2000, LF leg. Mey & Ebert; 3 specimens BMNH: INDONESIA- SERAM Solea, Malaise Trap on River bank, viii.1987 M.C. Day BMNH{E}2004-198; 1 specimen DTC: IR 21 - W. New Guinea, track Nabire/Illaga KM 65, Kali Utowa, 250M, 18.-19.vii.1991 Balke & Hendrich leg.; 1 specimen NME: INDONESIA SUMATRA/INDONESIA,Umg. Bukitlawa, LF 08.III.1995 leg.U.Buchsbaum; 1 specimen NME: Indonesia, Irian Jaya, Nabire 100km W Yeretua Wondowoi Mts. VII.1998, leg. M. Balke, 100m üNN; 1 specimen NME, 1 specimen DTC: Sapintus gracilicornis (Pic) det. D.Telnov, 2002 / INDONESIA,Irian Jaya Jayapura district Genyem,50m NN,IV.-V.1999,leg. M.Balke; 3 specimens NME, 1 specimen DTC: INDONESIA Irian Jaya Asori N Somyangga 02°37'S,136°13'E KÜ 07.I.1999 leg.A.Weigel; 1 specimen NME, 1 specimen DTC: INDONESIA Irian Jaya Asori/Wapoga River,N Umg. Somyangga KL 02°37'S,136°13'E UWP 08.I.1999 leg.A.Weigel; 15 specimens BMNH: INDONESIA: Borneo Kalimantan Tengah Busang / Rekut confl. 0°03'S, 113°59'E / August 2001 MV light Brendell / Mendel / Barito Ulu 2001' BMNH(E) 2001-191; 1 specimen NME: INDONESIA Sulawesi bor. 1km S Sawangan, Flußtal b. River Park resort 250-300m 01°22'51"N, 124°56'56"E 01.-03.II.2004 LF leg. A.Skale; 2 specimens MHUB: **Sulawesi** Selatan Malili, Karebbe am Larona, 14.X.2005 leg. W. Mey; 1 specimen MHUB: **Sulawesi** Selatan Leduledu b. Sorowako Koro Kandara, Turm 15.X.2005, LF leg. W. Mey; 3♂ & 5♀ MHUB: **Borneo** Sabah Danum Valley F.C. 15.-17.VIII.2005 Sg. Palum Tambun, light tower, leg. Mey & Ebert; 2 specimens DTC: **INDONESIA**, central Borneo, Prov. Kalimantan Barat, Putussibau N env., 0°53'N, 112°56'E, 02-10.I.2009, secondary rainforest, leg. A. Napolov; 1 specimen SMNS: BORNEO, Sabah, Danum Valley, Rainforest Lodge, 19.-20.X.2009, leg. U. + H.J. BREMER; 1 specimen NME: Indonesia, Irian Jaya, Nabire 100 km W Yeretua, Wondowoi Mts., VII.1998, leg. M. Balke, 100 m üNN.; 1 specimen NME: INDONESIA, Irian Jaya Nabire distr., 150mNN Cemara River VIII.1998, leg. M.Balke / Sammlung NATURKUNDEMUSEUM ERFURT; 1 specimen NME: INDONESIA, Irian Jaya Nabire distr., Wondiwol Mts., Yeretua IX.1998, 100 m NN leg. M.Balke / Sammlung NATURKUNDEMUSEUM ERFURT; 6 specimens NME: INDONESIA, Irian Jaya Jayapura district Genyem, 50m NN, IV.-V.1999, leg. M.Balke; 16 specimens BMNH: INDONESIA: Borneo Kalimantan Tengah Busang / Rekut confl. 0°03'S, 113°59'E / August 2001 MV light Brendell / Mendel / Barito Ulu 2001' BMNH(E) 2001-191.; 1 specimen DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 18-19.IX.2007, white

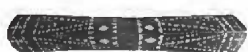


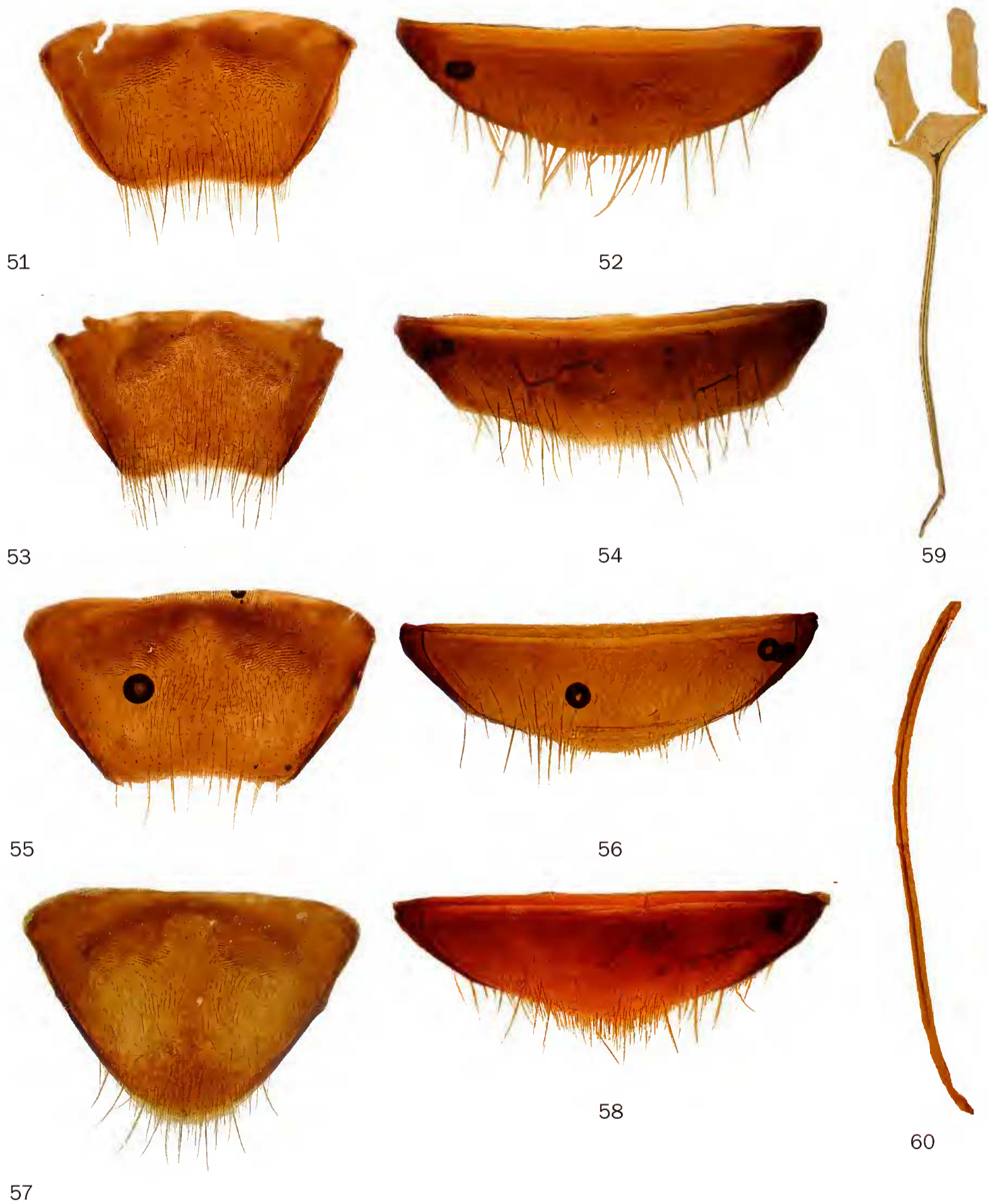
light, leg. D.Telnov & K.Greke; 3 specimens DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Wairoro vill. ~10 km W, Gunung Benteng mt. ridge, 0°12'20,19"N 127°48'44,87"E, 150-450 m, 18-20.IX.2007, primary rain forest, river valley, UV light, leg. D.Telnov & K.Greke; 4 specimens NME, 2 specimens DTC: INDONESIA C-Sulawesi 20km NE Palu, 5km W Tawaell 250m S 0°43'45", E 119°55'95" 02.III.2009 leg. A. Skale LF (019); 3 specimens NME, 1 specimen DTC: INDONESIA C-Sulawesi ca. 20km NE Palu, ca. 3m [sic!] W Tawaell 170m S 0°43'56", E 119°55'30" 03.III.2009 leg. A. Skale river valley (020); 1 specimen DTC: **INDONESIA** E, Prov. Maluku tengah, Seram N, distr. Seram Utara, Horale (former Saka) vill. env., 02°56'15"S, 129°04'54"E, 06.IV.2009, shrubs, gardens and secondary lowland forest, white light, leg. D.Telnov & K. Greke; 1 specimen DTC: **INDONESIA** E, Prov. Maluku tengah, Seram N, distr. Seram Utara, Trans-Seram road between Masohi and Sawai, Horale (former Saka) vill. ~7 km SW, river valley, 02°59'15"S, 129°02'37"E, 07.IV.2009, primeval lowland rainforest, on young trees along the river, leg. D.Telnov & K.Greke; 1 specimen NME: INDONESIA W-PAPUA 130km SE Kaimana, Omba (=Yamor) river 10-20km from coast, S4°05'49"/E134°54'09", 10-20m, 09.-11.II.2011 leg. A. Skale (008); 1 specimen DTC: INDONESIA E, Raja Ampat, Waigeo Island, Waisai 2-3 km W, 00°25'40"S, 130°47'36"E, ~70 m, 16-17.II.2012, secondary lowland rainforest on limestone, MV light, leg. D.Telnov; 1 specimen DTC: INDONESIA E, Raja Ampat, Waigeo Island, Waisai 3 km W, 00°26'04"S, 130°47'41"E, 40-50 m, 18.II.2012, secondary lowland rainforest on limestone & clearing, MV light, leg. D.Telnov.

This redescription is based on a male specimen from Danum Valley, Sabah, Malaysian Borneo.

Measurements, ♂: Total body length 4.07 mm, maximum combined width across the middle of elytra 1.20 mm. Head 0.75 mm long, across the eyes 0.80 mm broad, pronotum 0.80 mm long, maximum width 0.65 mm, elytra 2.50 mm long, 1.20 mm broad. Measurements, ♀: Total body length 3.62 mm, maximum combined width across the middle of elytra 1.40 mm. Head 0.70 mm long, across the eyes 0.75 mm broad, pronotum 0.70 mm long, maximum width 0.55 mm, elytra 2.20 mm long, 1.40 mm broad. Measurements, holotype ♀ *Anthicus neoguineensis*: Total body length 3.57 mm, maximum combined width across the middle of elytra 1.13 mm. Head 0.67 mm long, across the eyes 0.72 mm broad, pronotum 0.69 mm long, maximum width 0.62 mm, elytra 2.21 mm long, 1.13 mm broad.

Description: Dorsal surface black, occasionally forebody is reddish-black. Elytra with pale markings, consisting of one postbasal and one preapical yellow-to-orange transverse spot on each elytron. These spots can build transverse bands interrupted or not interrupted on the suture. The shape of the spots often contains irregular (waved/curved) anterior and posterior margins. The posterior spots are usually smaller than the anterior ones. Antennae and palpi yellow, orange or brown with the basal and the terminal antennomeres being paler. Legs with femora usually yellow but tibiae and tarsi darkened. Trochanters, pro- and mesocoxae usually yellow, metacoxae brown to reddish brown. Under-side of head and abdomen usually black or dark brown, thorax reddish-black; certain specimens have a uniformly black venter. Head smooth and slightly shiny, with midsized prominent eyes. Tempora about a half of the eye length, with rounded temporal angles. Head base truncate. Punctures large and deep, intervening spaces smooth and of variable size, ranging from smaller than the punctures to twice as large as the punctures. The vertex is more sparsely punctured than the frons. Pubescence yellowish, fine and long, more or less dense. Antennae very long and slender, reaching the middle (and slightly over) of the elytra in the male. Second antennomere in male short, half or less the size of the third antennomere. Antennomeres 3-9 elongate and slender. Penultimate antennomere slightly shorter than preceding ones. Terminal antennomere elongate and slender, about as long as the penultimate one (in some specimens the terminal antennomere is even slightly shorter than the penultimate one). Terminal maxillary palpomere elongate, cultriform. Pronotum smooth and slightly shiny dorsally, rounded anteriorly, significantly narrower than the head, with a feeble lateral postmedian transverse impression. Punctures large, dense and coarse, with intervening spaces much smaller than punctures. Pubescence yellowish, fine, dense and long, with separate long erect tactile setae on the sides and on the disc. Scutellum truncate apically. Elytra elongate, smooth and shiny. Punctures large and dense in the basal half, getting smaller and sparser postmedially. Intervening spaces irregular in size but smaller than punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male is



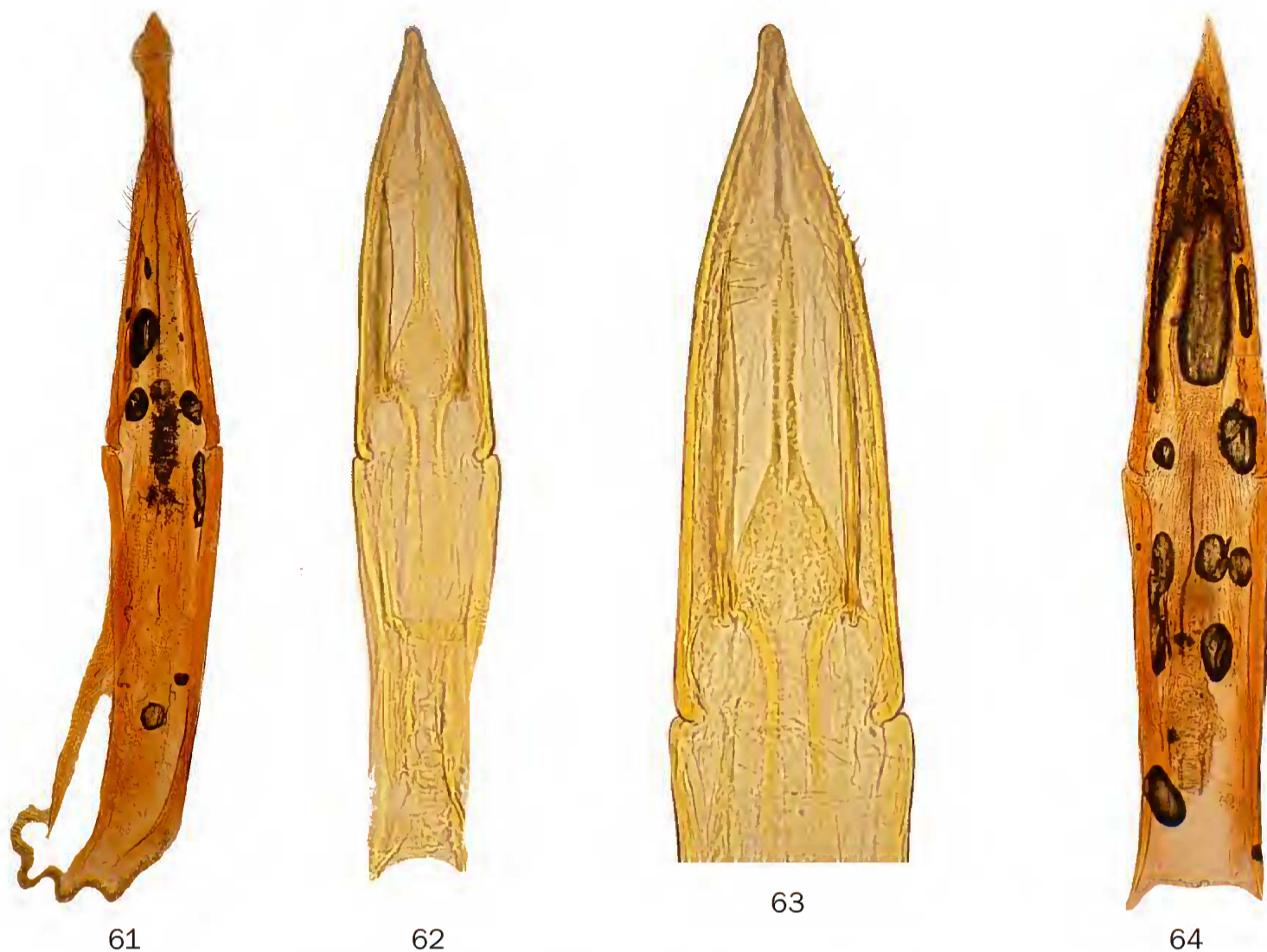


Figures 51-60. *Sapintus gracilicornis* (Pic, 1895). 51-52: ♂ from Danum Valley, Sabah, Borneo. 51 - Tergite VII; 52 - Sternite VII. 53-54, 59: ♂ from Nabire surroundings, Indonesian New Guinea. 53 - Tergite VII; 54 - Sternite VII; 59 - Spiculum gastrale. 55-56: ♂ from North Sulawesi. 55 - Tergite VII; 56 - Sternite VII. 57-58, 60: ♀ from Central Seram, Central Moluccas. 57 - Tergite VII; 58 - Sternite VII; 60 - Spiculum gastrale.

trapezoid, shallowly excavated on the apical margin and covered with long dense setae (Figs 51, 53, 55). Morphological sternite VII in male is short and broad, broadly rounded on the apical margin and covered with long dense setae (Figs 52, 54, 56).

Male aedeagus long, tegmen tapered to apex, setose laterally preapically (Figs 61-65). Morphological tergite VII in female is narrowly rounded on the apical margin and covered with long setae (Fig. 57). Morphological sternite VII in female is short and





Figures 61-65. *Sapintus gracilicornis* (Pic, 1895). 61: Aedeagus and penis, ♂ from Danum Valley, Sabah, Borneo. 62-63: ♂ from Nabire surroundings, Indonesian New Guinea. 62 - Aedeagus; 63 - Tegmen of aedeagus. 64: Aedeagus, ♂ from North Sulawesi. 65 - Aedeagus and penis, ♂ from Nabire surroundings, Indonesian New Guinea.



65

broad, broadly rounded and very densely setose on the apical margin (Fig. 58).

Sexual dimorphism: Females with comparatively shorter antennae, with second antennomere proportionally longer and without exposed morphological sternite VIII.

Ecology & biology: Sampled both in primary and secondary lowland rainforests, from canopy or partly dry branches/leaves, also attracted to white, MV & UV light. Inhabit lowland rainforests, collected at altitudes of 10-450 m.

Variability: This spe-

cies is variable in body length and colouration. Certain specimens are completely black-coloured with pale markings on the elytra. Other specimens have a dark reddish forebody. Elytral markings can be yellow or orange with irregularly formed margins and are of various sizes. Both pairs of pale spots can be strongly reduced to narrow (transverse) bands, or anterior pair can be fully absent. The base of the pronotum, or the whole forebody, is rufous in some specimens. The body size varies from 3.25 mm (♀ specimen from Central Halmahera) to 5.30 mm (♂ specimen from the Nabire surroundings, New Guinea).

Distribution: East Malaysia (Sabah), Indonesia (Kalimantan, Sulawesi), the Philippines (Balabac, Luzon, Tawi-Tawi), New Guinea (both Indonesian & Papua New Guinea).

Remarks: Two different type localities are given in the original description of this species, first as 'Sumbawa', a few rows behind as 'Iles Balabac et Banguey'. As there is no indication of Sumbawa on the holotype's original collecting label, this record should be considered as dubious. No specimens are hitherto known from Banguey Island, so this locality should also be ignored (this is not impos-



sible as a fact, because of the short distance between Banguay and Balabac). In fact, occurrence of this widespread species on both Sumbawa and Banguay is not automatically excluded but just needs further confirmation.

The taxon described as *Anthicus gracilicornis* var. *Semiobliteratus* Pic is only a colour morph with reduced pale markings of the elytra (the anterior pair of pale spots can be completely absent, the posterior pair can be strongly reduced in size).

Sapintus (s. str.) ***hirtipennis*** (Pic, 1900) (Map 3, plate 48 figs 6-7)

Holotype ♀ MSNG: N.Guinea Ighibirei Loria VI.VII.90 [printed, black border] / Typus [printed, text red, red border] / *hirtipennis* Pic [handwritten, black border] / *A. hirtipennis* Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Measurements, holotype ♀: Total body length 3.24 mm, maximum combined width across the middle of elytra 1.0 mm. Head 0.70 mm long, across the eyes 0.68 mm broad, pronotum 0.67 mm long, maximum width 0.59 mm, elytra 1.87 mm long, 1.0 mm broad.

Description: Forebody orange, the elytra somewhat paler with darkened humeri, black median transverse band (narrowly interrupted on suture) and dark transverse band in apical third (broadly interrupted on suture). Antennae, palpi and legs yellow. Underside uniformly yellow to orange-yellow. Head smooth and weakly shiny, with midsized prominent eyes. Tempora distinctly shorter than the length of an eye, temporal angles rounded. Head base broadly rounded. Punctures large but flat, not very dense, varying in size. Intervening spaces mostly larger than punctures. The vertex is more sparsely punctured than the frons. Pubescence yellowish, fine and long, not very dense. Antennae short and slender, hardly reaching elytral humeri in the female. Second antennomere in female slightly shorter than the next one. Antennomeres 3-8 elongate and slender. Penultimate antennomere slightly shorter than preceding ones and more distinctly thickened distally. Terminal antennomere conical and elongate, pointed, 1/3 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum smooth dorsally and weakly shiny on antero-lateral angles, densely punctured on disc, rounded anteriorly, significantly narrower than the head. Strongly constricted postmedium laterally toward narrow base. Punctures large and very dense on disc, intervening spaces smaller or much smaller than the punctures. On antero-lateral

angles, punctures are much sparser, with intervening spaces shiny and 2-3 times longer than the punctures. On base, punctures are coarse and partly rugulose. Pubescence yellowish, fine, dense and long, appressed and directed posteriorly on disc, with separate long erect tactile setae on the sides and on the disc. Scutellum rounded apically. Elytra elongate and smooth. Humeri strongly rounded. Punctures large but sparse in basal half, getting smaller in the apical third. Intervening spaces irregular in size, ranging from as large to 3 times larger than the punctures. Feeble but distinct postbasal transverse impression present. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Morphological tergite VII in female broadly rounded on apical margin. Morphological sternite VII in female short and broad, broadly rounded and setose on apical margin.

Sexual dimorphism: Male is unknown.

Distribution: This species is only known by the holotype collected at Ighibieri (= Igbira) village in Western Province, Papua New Guinea.

Sapintus (s. str.) ***horvathi*** (Pic, 1902) (Figs 66-70, maps 3-4, plate 51 figs 1-3)

Holotype ♂ HMNH: N. Guinea Biró 1898 [printed] / ♂ [printed] / Stephansort Astrolabe Bai [sic!] [printed] / Holotypus [printed, text red] 1902. *Pseudoleptaleus Horvathi* Pic [handwritten, red border] / *Pseudoleptaleus Horvathi* Pic n sp. [handwritten] / *Pseudoleptaleus Horvathi* Pic [handwritten] det.M. Pic [printed] Typus ! [handwritten, text red].

Paratype 1♂ HMNH: N. Guinea Biró 1898 [printed] / Stephansort Astrolabe Bai [sic!] [printed] / Paratypus [printed, text red] 1902 *Pseudoleptaleus Horvathi* Pic [handwritten, red border] / *Pseudoleptaleus Horvathi* Pic [handwritten] det.M. Pic [printed] Typus ! [handwritten, text red].

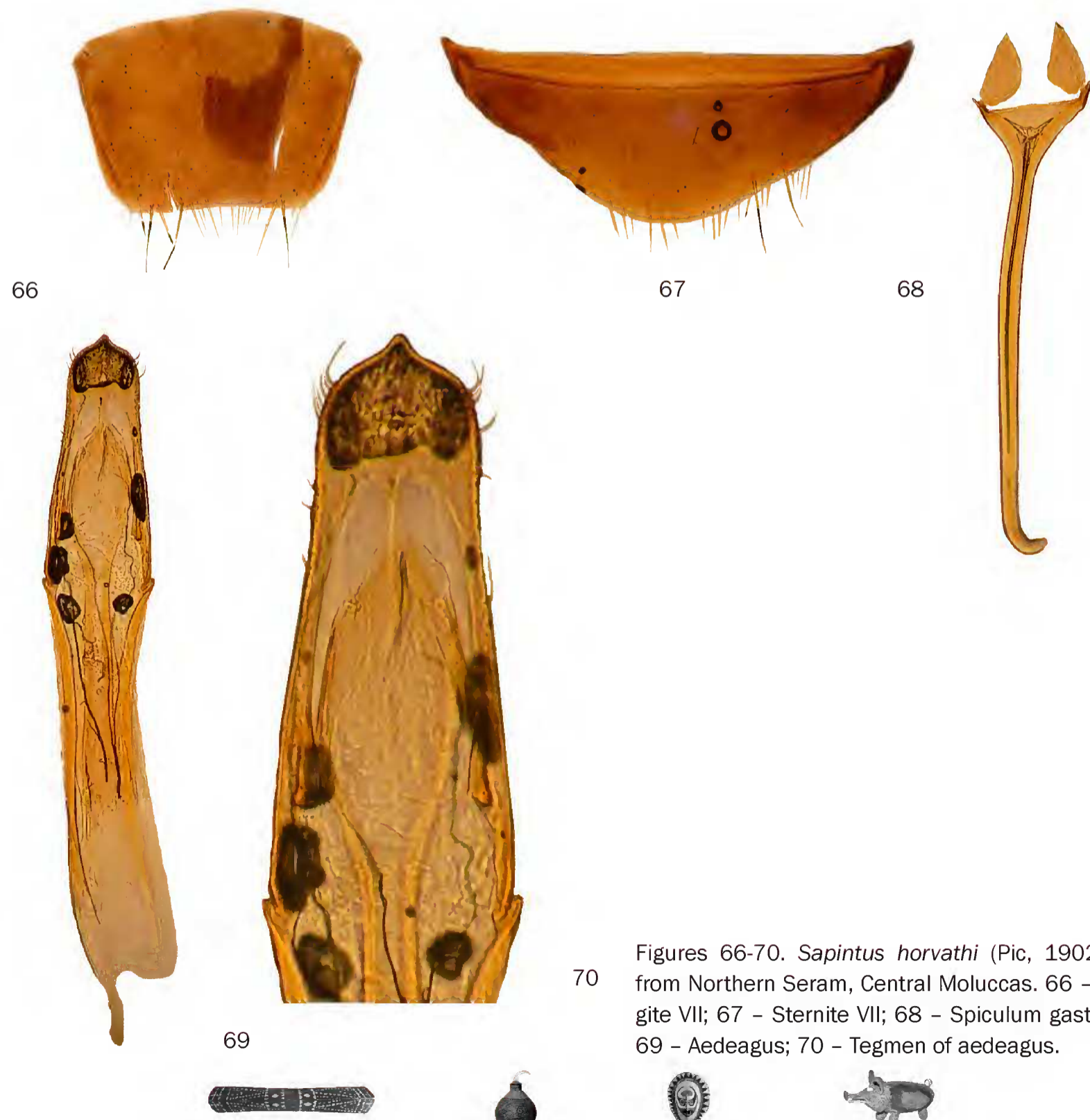
Additional material: 1 specimen DCC: vic Hollandia Dutch N.G. July-Sept 1944 Darlington [printed] / *Pseudoleptaleus* [printed] *horvathi* Pic [handwritten] det. G.Uhmann 19[printed] 91 [handwritten]; 2 specimens NME, 1 specimen DTC: Indonesia, Irian Jaya, Biak, 10m [sic!] N Bosnik, 136°20'E, 01°05'S UWP, 13.II.1998, leg. A.Weigel; 1 specimen NME: INDONESIA Irian Jaya Japen [sic!], 12km W Serui 03.I.1999 UWS KL leg. A.Weigel; 2 specimens DTC: INDONESIA E, Prov. Maluku tengah, Seram N, distr. Seram Utara, Horale (former Saka) vill. env., 02°56'15"S, 129°04'54"E, 05-06. IV.2009, shrubs, gardens and secondary lowland forest, beaten, leg. D.Telnov & K.Greke.



Measurements, holotype ♂: Total body length 2.52 mm, maximum combined width across the middle of elytra 0.78 mm. Head 0.50 mm long, across the eyes 0.55 mm broad, pronotum 0.50 mm long, maximum width 0.40 mm, elytra 1.40 mm long, 0.78 mm broad.

Description: Forebody brown to black or black with base of pronotum brown to reddish. Elytra black or black-brown with pale markings. These markings consist of a yellow or orange postbasal transverse band (can expand anteriorly along the suture, covering the scutellum and isolating the dark colouration of the humeri) and an elongate transverse band in the apical third. The preapical band is usually narrower than the postbasal one and can be broadly interrupted on the suture into two elongate transverse spots. The shape of both anterior and posterior spots is often with irregular (waved/curved) anterior and posterior margins. Antennae

and palpi usually yellow to orange, basal and intermediary antennomeres can also be more or less strongly darkened. Legs with femora bicolourate – pale in basal and dark in distal half. Tibiae and tarsi, if not pale, then partly or completely darkened. Underside reddish-brown, brown or black, trochanters and coxae yellow if general colouration of a specimen is not black. Head smooth and shiny, with large prominent eyes. Tempora rounded together with base. Punctures large but flat and sparse, intervening spaces larger than punctures. The vertex is more sparsely punctured than the frons. Pubescence whitish to yellowish, fine and long, sparse. Antennae long and slender, reaching postbasal transverse impression of elytra in the male. Second antennomere in male 1/4 shorter than the next one. Antennomeres 3-7 elongate and slender. Antennomeres 8-10 slightly shortened and thickened distally. Terminal antennomere asymmetric,



Figures 66-70. *Sapintus horvathi* (Pic, 1902) ♂ from Northern Seram, Central Moluccas. 66 – Tergite VII; 67 – Sternite VII; 68 – Spiculum gastrale; 69 – Aedeagus; 70 – Tegmen of aedeagus.

conical, pointed, 1/3 longer than the penultimate one. Terminal maxillary palpomere somewhat axiform. Pronotum smooth and shiny dorsally, very coarse, punctured and wrinkled in basal half of disc. Broadly rounded anteriorly, significantly narrower than head, strongly narrowed postmedium laterally toward narrow base. Anterior half and angles very sparsely punctured. Basal half of disc coarse, wrinkled, intervening spaces much smaller than punctures. Pubescence yellowish, fine, dense and long, appressed and directed posteriorly on disc, with separate long erect tactile setae on the sides and on the disc. Scutellum triangular, pointed apically. Elytra elongate and widened across middle, smooth dorsally. Humeri rounded. Feeble but distinct postbasal transverse impression present. Punctures variable in size, not very dense, getting smaller in apical third. Intervening spaces irregular in size, ranging from smaller than the punctures to 3 times larger than the punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Metatibiae slightly thickened medially in males. Male basal tarsomere of the metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male broadly rounded on apical margin (Fig. 66). Morphological sternite VII in male truncate on apical margin (Fig. 67). Male aedeagus setose laterally preapically, parameres strongly narrowed prior to short pointed apex (Figs 69-70).

Sexual dimorphism: Antennae comparatively shorter in females and female morphological sternite VIII not exposed. Metatibiae without modifications in females.

Variability: This species is variable in body length and colouration. Certain specimens are completely black coloured with pale markings on the elytra. Other specimens have a reddish forebody. Elytral markings can be yellow or orange with irregularly formed margins and of various dimensions.

Distribution: This species is widespread and is known from Yule Island (southern coast of Papuan Peninsula, Papua New Guinea), Cenderawasih Bay (Biak & Yapen islands), Central Moluccas (Seram Island), Morobe Province of Papua New Guinea and also from North Australia (Queensland).

Remarks: Yapen is the correct name for the collecting locality of one of the specimens (not 'Japen' as is erroneously specified on the original collecting label). Specimens from Queensland have not been anatomically studied.

Sapintus (s. str.) **insulanus** (Pic, 1900) (Map 3, plate 48 figs 4-5)

Lectotype ♀ MSNG [herewith designated]: N.Guinea Isola Yule [printed] V. [handwritten] 18[printed] 75 [handwritten] L.M.D'Albertis 1876-77 [printed] [black border] / Typus [printed, text red, red border] / insulanus Pic [handwritten, black border] / Anthicus insulanus Pic typus ! [handwritten] / Mus. Civ. Genova [printed].

Paralectotype 1 specimen MNHN [herewith designated]: N.Guinea Isola Yule [printed] V. [handwritten] 18[printed] 75 [handwritten] L.M.D'Albertis 1876-77 [printed] [black border] / TYPE [printed, label red] / insulanus [handwritten].

Measurements, lectotype ♀: Total body length 2.48 mm, maximum combined width across the middle of elytra 0.83 mm. Head 0.58 mm long, across the eyes 0.61 mm broad, pronotum 0.49 mm long, maximum width 0.48 mm, elytra 1.41 mm long, 0.83 mm broad.

Description: Dorsal surface orange, elytra somewhat paler, with a broad dark transverse median band on the elytra immediately behind the middle. This band gets narrower on the sides and is most broad on the suture. Antennae, palpi and legs yellow to yellowish-orange. Underside orange. Head smooth and shiny, with large prominent eyes. Tempora half the size of the eye length, broadly rounded together with base. Punctures large and deep but sparse, intervening spaces ranging from as large to two times larger than the punctures. Frons with distinct broad impunctured median line. Pubescence whitish to yellowish, fine and long, sparse. Antennae slightly thickened distally, reaching humeri of elytra. Second antennomere in female indistinctly shorter than the next one. Antennomeres 7-10 thickened distally. Terminal antennomere asymmetric, blunt, almost two times longer than the penultimate one. Terminal maxillary palpomere small, cultriform. Pronotum smooth and shiny dorsally. Broadly rounded anteriorly, gradually narrowing toward base, significantly narrower than the head, with 3 small blunt lateral denticles in anterior half. Punctures very coarse on disc. On the disc, intervening spaces are mainly smaller than the punctures; punctures on the antero-lateral margins are much smaller and sparser than on the disc. Pubescence yellowish, fine, dense and long, appressed, with separate long erect tactile setae on the sides and on the disc. Scutellum rounded apically. Elytra relatively short, smooth and shiny dorsally. Punctures very large and deep, dense, getting smaller and more flat (but not much sparser) in the apical third. Intervening spaces irregular in size, mainly



smaller than or equal to punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward the basal third. Hind wings fully developed. Legs long and slender. Metatibiae slightly thickened medially in males. Female basal tarsomere of the metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in female rounded on apical margin. Morphological sternite VII in female not studied.

Sexual dimorphism: Male is unknown.

Distribution: This species is only known by type series collected on Yule Island near the mainland of Central Province, Papua New Guinea. The records from Australia (Queensland) by Uhmman (2000; 2007) and Dorey (Bird's Head of New Guinea) (Uhmman 2007) both need further confirmation.

Remarks: It is very possible that this species is conspecific with the Australian *S. pollocki* Uhmman, 1999, but as long as no male specimen remains known for *S. insularis* it will be impossible to confirm this hypothesis.

Sapintus* (s. str.) *insularis (Werner, 1965) (Map 1, plate 51 figs 4-5, plate 55 figs 4-5)

= *Sapintus placitus* Bonadona, 1981 [consider new synonymy above]

Paratype ♂ *S. insularis* DCC: KUSAIE, Pakusrik [sic!] I m. II-13-53 V.F.G. Clarke [handwritten] / PARATYPE *Anthicus* ♂ *insularis* Werner [handwritten] / PARATYPE [printed, label blue] / Genit Fig. [handwritten] / F. G. Werner collection [printed].

Holotype ♂ *Sapintus placitus* ZMUC: Bismarck Isl. Dyaul Sumuna 4. March 1962 Noona Dan Exp. 61-62 [printed] / Caught by Mercury - light [printed] / HOLOTYPE [printed, label red] / *Sapintus placitus* n.sp [handwritten] P.Bonadona dét. 19[printed] 78 [handwritten].

Measurements, paratype ♂: Total body length 2.85 mm, maximum combined width across the middle of elytra 1.05 mm. Head 0.55 mm long, across the eyes 0.60 mm broad, pronotum 0.60 mm long, maximum width 0.55 mm, elytra 1.70 mm long, 1.05 mm broad.

Description: Dorsum and venter uniformly black to dark black-brown. Antennae brown, two basal antennomeres paler brown. Legs brown with paler tarsi. All trochanters yellowish brown. Head very densely punctured dorsally, with very large prominent eyes. Tempora much shorter than the eye length. Temporal angles broadly rounded. Base truncate to weakly concave. Punctures very dense but flat and fine, intervening spaces much smaller than punctures.

Pubescence yellowish, fine and long, sparse. Antennae elongate and slender, reaching slightly over the elytral humeri. Second antennomere in male half shorter than the next one. Antennomeres 3-6 elongate and slender, slightly thickened distally. Antennomere 4 in male strongly thickened distally. Antennomeres 7-10 shortened and distinctly thickened distally. Terminal antennomere slightly asymmetric, elongate, ovoid, pointed, 1/3 longer than the penultimate one. Terminal maxillary palpomere small, cultriform. Pronotum very densely punctured dorsally. Broadly rounded anteriorly, gradually narrowing toward base, slightly narrower than head. Punctures larger than on head, flat and very dense. Intervening spaces much smaller than punctures. Pubescence yellowish, fine, long and sparse, appressed. Scutellum truncate apically. Elytra elongate, smooth dorsally. Punctures large and deep, dense, getting smaller in apical third. Intervening spaces irregular in size, mainly smaller than or equal to punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae very narrow, developed in apical third only. Hind wings fully developed. Legs long and slender. Male metatarsi as long as metatibiae. Male basal tarsomere of the metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male truncate on apical margin (no figure available). Morphological sternite VII in male truncate apically. Aedeagus with simple, pointed tegmen (see Werner, 1965).

Sexual dimorphism: The female was not available for this study.

Distribution: Caroline Islands, Marshall Islands, Hawaii, Dyaul (also known as Djaul) Island of the Bismarck Archipelago (Papua New Guinea).

Remarks: The correct spelling of the type locality is 'Pukusrik'.

Sapintus* (s. str.) *javanus (Marseul, 1882a) (Figs 71-75, map 3, plate 51 figs 6-7)

= *Anthicus javanus* Marseul, 1882b [duplicative description]

= *Anthicus luteonotatus* Pic, 1913

= *Sapintus sodalis* (Pic, 1895) [consider new synonymy above]

Syntype *Sapintus javanus* RMNH: deGavere Batavia Java [handwritten] / *javanus* 107^a [handwritten].

Syntype ♂ *Anthicus luteonotatus* SDEI: *Anthicus luteonotatus* Pic [handwritten] / Taihorin Formosa Sauter, 1911 [printed] VII [handwritten] / Syntypus [printed, label red] / coll. DEI Eberswalde [printed] / *Anthicus luteonotatus* Pic [handwritten] (see also Telnov 2001a).



Holotype ♀ *Sapintus sodalis* MNHN: Sumatra (Grouvelle) [handwritten] / type [handwritten] / TYPE [printed, label red] / *sodalis* Pic [handwritten].

Additional material: 4 specimens MHUB: S.O. Borneo, Grabowsky / det. v. Kreckich; 1 specimen BMNH: Singapore. Dr. M.Cameron. B.M. 1936-555.; 1 specimen BMNH: Spore / 434 / SINGAPORE: C.J.Saunders. B.M.1933-227.; 1 specimen DTC: R of.S.10.8.22er-side [text partly unreadable] / SINGAPORE: C.J.Saunders. B.M.1933-227.; 1 specimen NME: INDONESIA,Irian Jaya Jayapura, Lake Sentani Südufer, 100 m NN VI.1998, leg. M.Balke; 1 specimen DTC: INDONESIA,Irian Jaya Jayapura,Cyclops Mts Sentani,200 m NN VI. 1998,leg. M. Balke; 1 specimen IRSN: Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baileta, Light Misc 5 8-III-1993 Leg Olivier Missa; 1 specimen SKC: NO Sarawak Niah N.P. 0-100m 14-16.X.2001 leg. S.Kurbatov; 1 specimen DTC: INDONESIA N-Sulawesi 5 km NE Tabulo, Manangga village 50-200m N 0°32'75", E 122°10'10" 28.II.2009 leg. A. Skale (013); 1 specimen NME: INDONESIA N-Sulawesi vic. Raja Basar b. Mouting, 15m N 0°29'78", E 121°12'99" 28.II.2009 leg. A. Skale (016); 1 specimen PAC: #30 of 30.viii.12 Tai O valley Lantau. HK.

This redescription is based on a male specimen from the surrounding of Tabulo, North Sulawesi.

Measurements, ♂: Total body length 2.26 mm, maximum combined width across the middle of elytra 0.73 mm. Head 0.50 mm long, across the eyes 0.50 mm broad, pronotum 0.45 mm long, maximum width 0.46 mm, elytra 1.31 mm long, 0.73 mm broad. Measurements, ♀ from Raja Basar surroundings, North Sulawesi: Total body length 2.37 mm, maximum combined width across the middle of elytra 0.80 mm. Head 0.52 mm long, across the eyes 0.53 mm broad, pronotum 0.45 mm long, maximum width 0.48 mm, elytra 1.40 mm long, 0.80 mm broad.

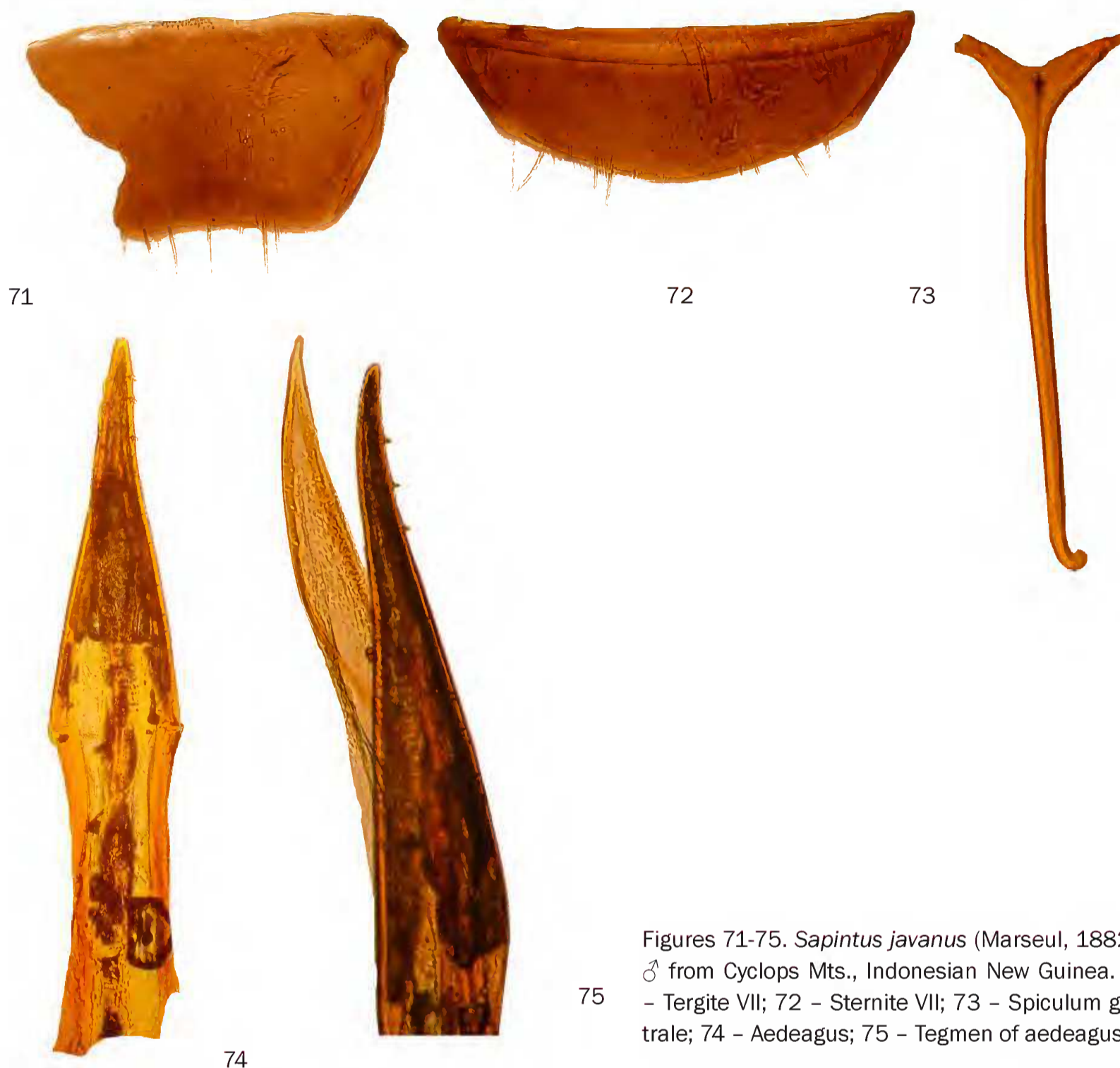
Description: Forebody black or very dark red, elytra black or black-brown with pale markings. These markings consist of a large postbasal yellow-to-orange spot (narrowly interrupted on the suture or fused together, bearing the lateral margin of the elytra) and a smaller ovoid preapical spot on each elytron. Antennomeres 2-4 pale, basal antennomere and items 5-11, darkened, as is the palpi also. Legs yellow to pale orange, femora darkened in some specimens. Underside brown, pro- and mesothorax reddish, pro- and mesocoxae yellow in some specimens. Head slightly shiny or opaque dorsally, with small but prominent eyes. Tempora as long as or indistinctly longer than the length of an eye, temporal angles rounded. Head base very broadly rounded,

subtruncate. Punctures very large, dense and rough, intervening spaces smooth, much smaller than the punctures. Pubescence whitish, fine, sparse. Antennae short and stout, reaching the base of the elytra in the male. Second antennomere in male elongate, slightly shorter than the next one. Antennomeres 3-6 slightly elongate, 7-11 shortened and thickened, building weak club. Penultimate antennomere as long as it is broad, trapezoid. Terminal antennomere strongly asymmetric, blunt, conical, pointed, almost two times longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum slightly shiny or opaque dorsally, broadly rounded anteriorly, narrower than head, strongly narrowed laterally posteriad from antero-lateral angles toward narrow base. Punctures very large, dense and coarse, denser than on the head. Intervening spaces smooth, distinctly smaller than these punctures. Pubescence whitish, fine, quite long, appressed, with separate long erect setae on the sides and the disc. Scutellum triangular, pointed apically. Elytra elongate, smooth and shiny. Punctures large and dense in basal half, getting smaller and sparser in apical third. Intervening spaces irregular in size, mostly smaller, rarely as large as the punctures. Pubescence whitish or yellowish, fine. long and dense, suberect. Undersetae long, directed obliquely laterally. Sutural striae fine and narrow, developed in apical third of elytra. Hind wings fully developed. Legs slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Male protibiae slightly thickened on internal margin. Morphological tergite VII in male broadly trapezoid, truncate or shallowly excavate on apical margin (Fig. 71). Morphological sternite VII in male very short, very broadly rounded on apical margin (Fig. 72). Aedeagus slender, with elongate and pointed tegmen; preapical area of tegmen tridentate on each lateral margin (Figs 74-75). Morphological tergite VII in female broadly rounded on apical margin. Morphological sternite VII in female short, very broadly rounded on apical margin.

Sexual dimorphism: Female with elytra less elongate, more widened postmedium laterally. Pro-tarsi and protibiae less distinctly thickened in the female than in the male.

Ecology & biology: Collected in secondary and primary lowland rainforests and in lowland and lower montane monsoon forests, also attracted to white and mixed light. Hemp (1994) and Hemp & Dettner (2001) listed this species among canthariphilous Anthicidae, referring to Young (1984). As was already mentioned above, identifications made





Figures 71-75. *Sapintus javanus* (Marseul, 1882a) ♂ from Cyclops Mts., Indonesian New Guinea. 71 - Tergite VII; 72 - Sternite VII; 73 - Spiculum gastrale; 74 - Aedeagus; 75 - Tegmen of aedeagus.

by earlier authors were often not based on the study of type specimens and/or their genital organs. Currently I am unable to comment on which species of Anthicini has been attracted to cantharidin in Thailand and was consequently listed by Young (1984) as *Sapintus javanus*. Therefore I cannot currently approve or reject *S. javanus* as belonging to canthariphilous insects.

Distribution: This is a very widely distributed species, known from the Greater Sunda Islands (Java, Sulawesi, Sumatra, the whole of Borneo), SE China (inclusive of Hong Kong), India (except the arid and semiarid areas of the West), Japan, Peninsular Malaysia, Sri Lanka, Taiwan, Thailand, Vietnam, New Guinea (both the Indonesian part and Papua New Guinea).

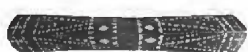
Remarks: The figure of the aedeagus presented by Krekich-Strassoldo (1930: 259, figure 9P) is incorrect and represents different *Sapintus* species

which cannot be properly identified on base of this figure. I cannot agree with the comment by Krekich-Strassoldo (1930: 259) that *S. javanus* (Marseul) and *S. malayensis* (Pic) are conspecific. These two species are clearly different (see the chapter 'Identification key to species of *Sapintus* from the Indo-Australian transition zone' and the individual diagnoses).

Sapintus* (s. str.) *loriae (Pic, 1900) (Map 3, plate 52, figs 1-2)

Lectotype ♀ MSNG [herewith designated]: N.Guinea Ighibirei Loria VI.VII.90 [printed, black border] / Typus [printed, text red, red border] / Loriae Pic [handwritten, black border] / A. Loriae Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Paralectotypes 10 specimens [herewith designated]: 6 specimens MSNG: same label as in lectotype; 1 specimen MSNG: N.Guinea Ighibirei Loria VI.VII.90 [printed,



black border] / *Anthicus Loriae* Pic Cotyp. [handwritten] / Mus. Civ. Genova [printed]; 1 specimen MNHN: N.Guinea Ighibirei Loria VI.VII.90 [printed, black border] / type [handwritten] / TYPE [printed, label red] / *A Loriae* Pic [handwritten]; 2 specimens MNHN: N.Guinea Ighibirei Loria VI.VII.90 [printed, black border] / type [handwritten].

Measurements, lectotype ♀: Total body length 3.15 mm, maximum combined width across the middle of elytra 1.15 mm. Head 0.66 mm long, across the eyes 0.65 mm broad, pronotum 0.59 mm long, maximum width 0.52 mm, elytra 1.90 mm long, 1.15 mm broad.

Description: Forebody and scutellum red, elytra black-brown with preapical area indistinctly paler. Antennae pale on base, darkened at antennomeres 4-11. Palpi and legs orange. Underside brown, prothorax red. Head densely punctured dorsally, with large prominent eyes. Tempora distinctly shorter than the length of an eye, temporal angles rounded. Head base very broadly rounded, subtruncate. Punctures large and flat, sparse. Intervening spaces larger than these punctures, but finely microstriate and covered by very dense minute punctures. Pubescence yellowish, fine, long and dense. Antennae slender, reaching slightly over the elytral humeri in the female. Second antennomere in female slightly shorter than the next one. Antennomeres 3-9 elongate and slender. Penultimate antennomere slightly shortened and indistinctly thickened distally. Terminal antennomere asymmetric, elongate, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum densely punctured dorsally except for smooth antero-lateral margins, rounded anteriorly, significantly narrower than the head. Strongly narrowed postmedium laterally toward narrow base. Punctures of two sizes: basic punctures very small, dense on the basal half of the disc but much sparser on the anterior half and on the sides. Intervening spaces smaller than these punctures. Larger punctures are much sparser, their intervening spaces are between as large to two times larger than the punctures. Pubescence yellowish, fine, long and dense, with separate long erect setae on the sides and the disc. Scutellum triangular, pointed apically. Elytra elongate and smooth. Punctures large and dense in the basal half, getting smaller but not much sparser in the apical third. Intervening spaces irregular in size, mostly smaller, rarely as large as the punctures. Pubescence yellowish, long and dense, appressed. Undersetae directed obliquely laterally. Sutural striae broad,

developed from apices toward the basal third of the elytra. Hind wings fully developed. Legs long and slender. Morphological tergite VII in female broadly rounded on apical margin. Morphological sternite VII in female short and broad, broadly rounded on apical margin.

Sexual dimorphism: The male was not available for this study.

Distribution: This species is only known by the type series collected at Ighibieri (= Ighibira) village in Western Province, Papua New Guinea.

***Sapintus* (s. str.) *macrops* sp. nov.** (Fig. 76, map 3, plate 52 figs 3-4)

Holotype ♂ NME: INDONESIA, Irian Jaya Nabire distr., 150 m NN Cemara River VIII.1998, leg. M.Balke [printed].

Paratypes 2♀ MHUB: IR 21 - W.New Guinea, track Nabire-Illaga KM 65, Kali Utowa, 250M, 18.-19.vii.1991 Balke & Hendrich leg. [printed] / *Sapintus* [printed] *rugosicollis* Pic [handwritten] det. G. Uhmman 19 [printed] 92 [handwritten].

Derivatio nominis: Named from the Greek 'macro' [large] + 'ops' [eye], because of the very large eyes of this species.

Measurements, holotype ♂: Total body length 2.67 mm, maximum combined width across postmedium of elytra 0.85 mm. Head 0.57 mm long, across the eyes 0.52 mm broad, pronotum 0.50 mm long, maximum width 0.47 mm, elytra 1.60 mm long, 0.85 mm broad. Measurements, ♀: Total body length 2.55 mm, maximum combined width across apical third of elytra 0.81 mm. Head 0.55 mm long, across the eyes 0.54 mm broad, pronotum 0.45 mm long, maximum width 0.41 mm, elytra 1.50 mm long, 0.81 mm broad.

Description: Forebody reddish-orange, elytra black. Antennae brown with basal antennomere red-to-orange and antennomeres 2-3 slightly paler than items 4-11. Palpi and legs orange (meso- and metafemora brown in the holotype), terminal maxillary palpomere darkened. Pro- and mesothorax reddish brown. All coxae and trochanters reddish brown, abdomen brown to black-brown. Head opaque dorsally, with very large and strongly prominent eyes covering almost the whole sides of the head. Tempora very short, temporal angles rounded. Head base truncate or subtruncate (very broadly rounded). Punctures very dense but fine and flat, intervening spaces smaller than punctures on the frons. Pubescence yellowish, fine, long and dense. Antennae slender, in both sexes reaching slightly over the elytral humeri. Second antennomere in





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Figure 76. *Sapintus macrops* sp. nov., holotype ♂ – Tergite VII.

male 1/4 shorter than the next one. Antennomeres 3-7 elongate and slender, 7th antennomere thickened distally. Antennomeres 8-10 in male stouter, distinctly thickened distally. Terminal antennomere asymmetric, blunt, conical, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum opaque dorsally, densely minutely punctured, rounded anteriorly, narrower than head. Narrowed postmedium laterally toward base, intervening spaces much smaller than the punctures on the disc and in the pre-basal area. Antero-lateral angles less densely punctured, but also opaque. Pubescence yellowish, fine, long and dense, appressed, with separate long erect setae on the sides and the disc. Scutellum triangular, pointed apically. Elytra elongate, densely, coarsely punctured, opaque or slightly shiny dorsally. Punctures large and dense, almost not getting smaller toward apices. Intervening spaces smaller than punctures. Pubescence yellowish, long and dense, appressed. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward the basal third of the elytra. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male trapezoid, rounded on apical margin (Fig. 76). Morphological sternite VII in male short and broad, very broadly rounded on apical margin. Tegmen of aedeagus tapered apically. Morphological tergite VII in female broadly rounded on apical margin. Morphological sternite VII in female broad, very broadly rounded on apical margin.

Sexual dimorphism: Almost not indicated. Antennomeres 9-10 are comparatively broader in the male than in the female. The eyes are comparatively larger in the male.

Ecology & biology: Collected in primary lowland

rainforest at an altitude of 250 m.

Differential diagnosis: This species morphologically resembles *S. rugosicollis* (Pic, 1900) (Papua New Guinea: Trans-Fly lowlands) [I was unable to study the male genital organs of this species]. The eyes are smaller in *S. rugosicollis*, the tempora are about 1/3 shorter than the eye length. The pubescence on the head and pronotum is less dense and shorter, partly scale-like (especially near the base of the pronotum) in *S. rugosicollis*. The pronotum is coarsely punctured compared to the head in *S. rugosicollis* (about the same denseness and coarseness as in the *S. macrops*), with partly rugulose intervening spaces on the pronotum (not rugulose in *S. macrops*).

Distribution: The species is known from the surrounding regions of Nabire, in the northern Bird's Neck isthmus of New Guinea.

Sapintus* (s. str.) *madangensis Uhmann, 1995
(Figs 77-80, map 3, plate 52 figs 5-6)

Holotype ♂ NMNZ: GOGOL RIVER MADANG North East New Guinea R.W.HORNABROOK [printed] Sept 1969 [handwritten] / *Sapintus madangensis* sp. n. det. G. Uhmann 1995 [printed] / HOLOTYPE [printed, label red] / Museum of New Zealand Te Papa Tongarewa, PO Box 467, Wellington, N.Z. [printed].

Measurements, holotype ♂: Total body length 3.09 mm, maximum combined width across the middle of elytra 0.88 mm. Head 0.69 mm long, across the eyes 0.61 mm broad, pronotum 0.60 mm long, maximum width 0.61 mm, elytra 1.80 mm long, 0.88 mm broad.

Description: Dorsum dark red to red-brown, elytra with irregular pale yellow markings consisting of a broad postbasal transverse band, prolonged along the suture to the scutellum and toward the middle, where it meets with a median transverse oval spot enclosed laterally and posteriorly by a dark red pattern; in the apical third with another broad transverse band, very narrowly interrupted on the suture. Antennae, palpi and legs yellow, the latest with slightly darker femora. Underside uniformly pale orange. Head smooth dorsally, in part densely punctured, with large prominent eyes. Tempora broadly rounded, together with a head base which is indistinctly angulate medially. Punctures large and coarse on the frons and the near eyes, the intervening spaces much smaller than these punctures. Head dorsum posterior to eyes and on vertex extremely finely and sparsely punctured. Pubescence yellowish, fine, long and dense. Antennae slender, reaching slightly over the elytral humeri in



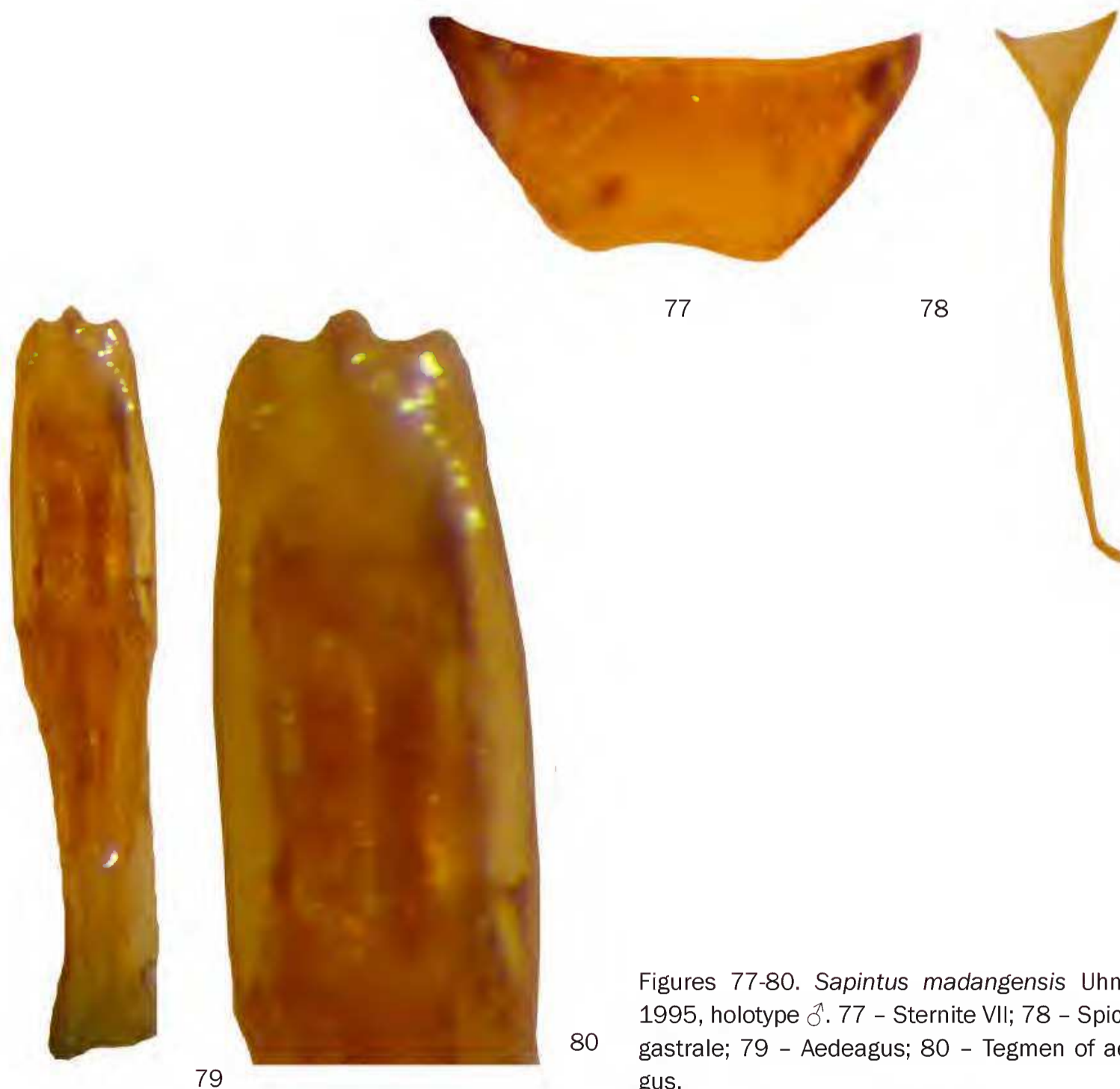
the male. Second antennomere in male not or indistinctly shorter than the next one. Antennomeres 3-6 elongate and slender, 7-8 thickened distally, 8-9 shortened. Terminal antennomere asymmetric, elongate, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum very densely punctured on the disc except for smooth antero-lateral angles, rounded anteriorly, about of the same width as the head. Strongly narrowed postmedium laterally toward narrow base. Punctures very dense and coarse on the disc, with intervening spaces irregular and much smaller than punctures. Antero-lateral margins finely and sparsely punctured, smooth. Pubescence yellowish, fine, long and dense, appressed, with separate long erect setae on the sides and the disc. Scutellum triangular, rounded apically. Elytra elongate and smooth. Punctures large and coarse but sparse. Intervening spaces irregular in size, ranging from as large to twice as large as the punc-

tures. Pubescence yellowish, long and quite sparse, suberect. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Male pro- and metatibiae slightly thickened medially. Male basal tarsomere of the metathoracic legs longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male broadly rounded on apical margin. Morphological sternite VII in male excavated on apical margin (Fig. 77). Aedeagus with tegmen tripartite apically (Figs 79-80). Sexual dimorphism: Female is unknown.

Distribution: This species is only known by the holotype collected near Madang in Papua New Guinea.

Sapintus* (s. str.) *malayensis (Pic, 1895) (Figs 81-85, map 5, plate 53 figs 1-2)

Holotype ♀ MNHN: ○ [small circular blue label without text] / type [handwritten] / TYPE [printed, label red] /



Figures 77-80. *Sapintus madangensis* Uhmann, 1995, holotype ♂. 77 - Sternite VII; 78 - Spiculum gastrale; 79 - Aedeagus; 80 - Tegmen of aedeagus.



malayensis Pic [handwritten] / pres bizonellus ... [handwritten, partly unreadable].

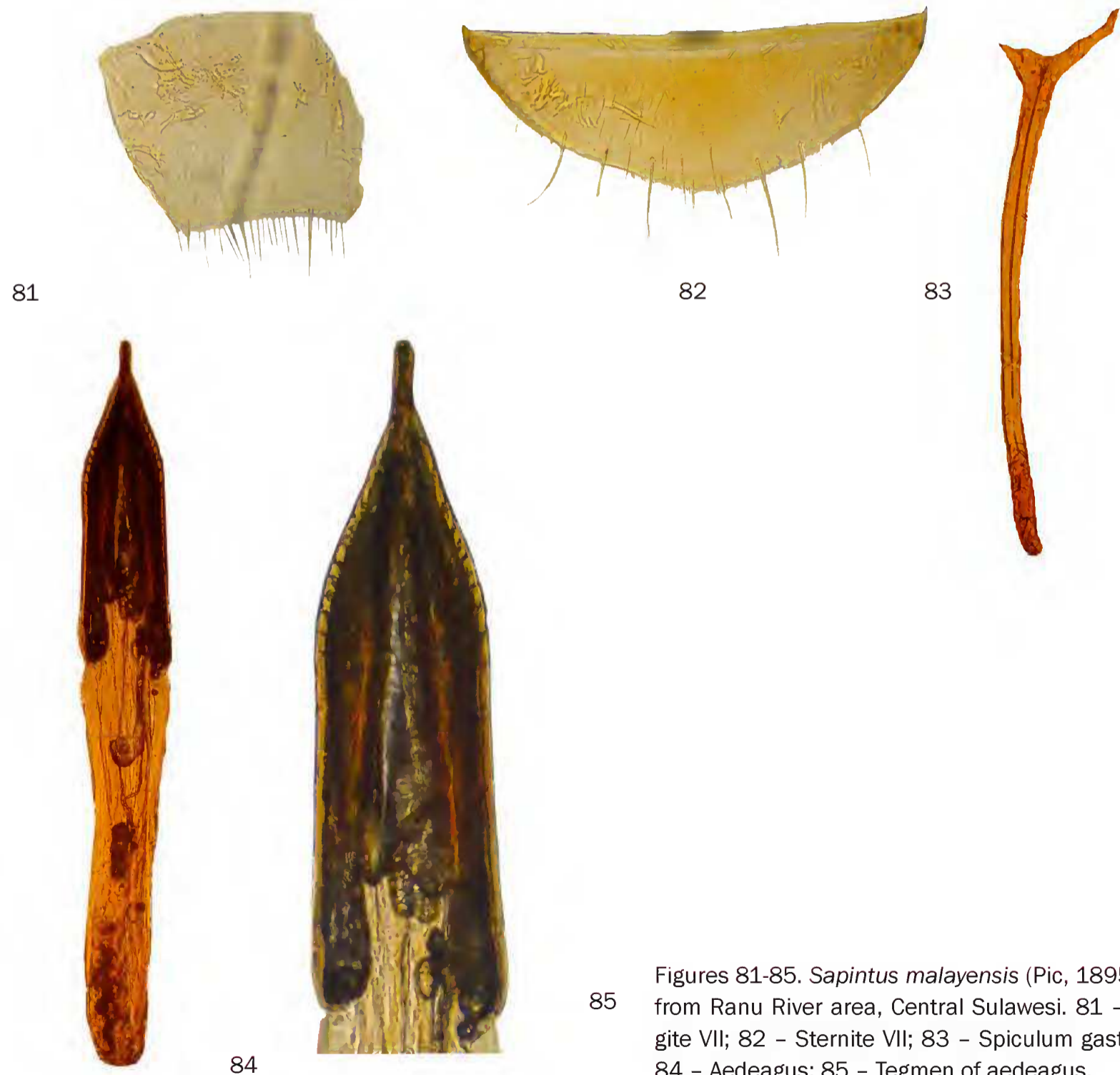
Additional material: 1♀ MHUB: Sumbawa Besàr 24.4.-2.5.27 B.Rensch S.G. / *Anthicus malayensis* Pic det. Dr. R. F. Heberdey; 1♀ BMNH: Under bark of fallen tree / SULAWESI TENGAH: Nr. Morowali, Ranu River Area. 27.i.-20.iv.1980 / M.J.D.Brendell B.M.1980-280; 1♂ BMNH: At light / SULAWESI TENGAH: Nr. Kolonodale, Gililana village 1°55'S-121°22'E. 7-8.ii.1980 / M.J.D.Brendell B.M.1980-280.

This redescription is based on a female specimen from Sumbawa Besàr and a male specimen from Kolonodale surroundings, Central Sulawesi.

Measurements, ♂: Total body length 2.66 mm, maximum combined width postmedium of elytra 0.78 mm. Head 0.51 mm long, across the eyes 0.57 mm broad, pronotum 0.52 mm long, maximum width 0.45 mm, elytra 1.63 mm long, 0.78

mm broad. Measurements, ♀: Total body length 3.07 mm, maximum combined width postmedium of elytra 0.97 mm. Head 0.67 mm long, across the eyes 0.65 mm broad, pronotum 0.60 mm long, maximum width 0.55 mm, elytra 1.80 mm long, 0.97 mm broad.

Description: Head and elytra pale orange, pronotum dark orange. Elytra pale with black humeri, broad median black transverse band interrupted on the suture and the brown apices (dark colouration prolonged antero-medially along the suture). Antennae, palpi and legs yellow. Underside uniformly orange or dark orange. Head smooth dorsally, with large prominent eyes. Tempora about 1/3 shorter than the eye length, with rounded temporal angles. Base truncate to subtruncate. Punctures large and dense on the frons and near the eyes, intervening spaces mostly much smaller than these punctures. Head dorsum posterior to eyes and on vertex more



85 Figures 81-85. *Sapintus malayensis* (Pic, 1895), ♂ from Ranu River area, Central Sulawesi. 81 - Tergite VII; 82 - Sternite VII; 83 - Spiculum gastrale; 84 - Aedeagus; 85 - Tegmen of aedeagus.



sparsely punctured. Pubescence yellowish, fine, long and dense. Antennae slender, in male reaching the postbasal transverse impression area, in the female reaching slightly over the elytral humeri. Second antennomere in the male 1/3 shorter than the next one, in the female 1/4 shorter than the next one. Antennomeres 3-8 elongate and slender, 9-10 somewhat thickened. Terminal antennomere in both sexes elongate, conical, pointed, 1/3 to 1/4 longer than the penultimate one. Terminal maxillary palpomere cultriform. Pronotum very densely and coarsely punctured, rounded anteriorly, narrower than the head. Strongly constricted postmedium laterally toward base. Punctures very dense and coarse on disc, with intervening spaces irregular and much smaller than punctures. Pubescence yellowish, fine, long and dense, appressed, with separate very long erect setae on the sides and the disc. Scutellum truncate apically. Elytra elongate and weakly smooth. Punctures large and coarse in basal half, intervening spaces irregular in size, ranging from smaller than to as large as punctures. In the apical half the punctures get smaller and more flat, but not much sparser. Pubescence yellowish, long and quite sparse, suberect. Under-setae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. The male basal tarsomere of the metathoracic legs is as long as or slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male truncate or very feebly excavated on apical margin (Fig. 81). Morphological sternite VII in male short and broad, broadly rounded on apical margin (Fig. 82). Aedeagus with narrow, prolongate but rounded apex (Figs 84-85). Morphological tergite VII in female broadly rounded on apical margin. The morphological sternite VII in the female was not studied.

Sexual dimorphism: Almost not indicated. Male body more slender than the female. Antennae longer on the male than on the female.

Variability: The forebody of the holotype is uniformly dark red. A dark median transverse band is not interrupted on the suture in the holotype. Specimens from Central Sulawesi are generally more coarsely punctate on the head.

Ecology & biology: Görnitz (1937), Hemp (1994) and Hemp & Dettner (2001) listed this species among canthariphilous Anthicidae. As was already mentioned above, identifications made by earlier authors, for example, those by R.F. Heberdey (mentioned Görnitz 1937), were often not based on studies of type specimens and/or their genital organs.

Currently I am unable to comment on which species of Anthicini have been attracted to cantharidin near Bangkok, Thailand and was consequently listed by Görnitz (1937) as *Anthicus malayensis*. Therefore I cannot currently approve or reject *Sapintus malayensis* as belonging to canthariphilous insects.

Distribution: This species originates from Sumbawa and Central Sulawesi (Wallacea), and is also mentioned as being from Peninsular Malaysia (Uhmman 1995b; 2000), Southern Vietnam and Java (Telnov 2001a). Records from Vietnam and Java are based on misidentified specimens and are to be ignored (but occurrence of this species in Java is considered possible). No specimens from Peninsular Malaysia were available for this study, but these records are considered doubtful because most of Uhmman's identifications are not based on study type material and male genital organs.

***Sapintus* (s. str.) *malut* sp. nov.** (Figs 86-94, map 4, plate 53 figs 3-4)

Holotype ♂ NME: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. S env., Tilope vill. 10 km SW, way to Oham (along Gunung Talaga mt.), 0°13'15,10"N 127°53'28,25"E, 14.IX.2007, edge of secondary lowland forest, beaten from freshly cut branches, D.Telnov & K.Greke.

Paratypes 36 specimens. 1 DTC: same labels as in holotype; 1 NME: IDO: N-Molukken Ternate, Laguna lake 45'44"N, 127°21'6"E 29.I.2006 lake side leg. A.Weigel KL; 3 NME, 1 DTC: INDONESIA N-Molukken Ternate Laguna lake, 0°45'44"N, 127°21'6"E 11.I.2006 leg. A.Skale lake side (+ 29.I.2006); 4 NME, 1 DTC: IDO: N-Molukken Hiri Island, 3km N of Ternate 100-400m, 0°53'6"N, 127°20'E 22.I.2006 leg. A.Weigel plantage; 2♀ NME, 2♀ DTC: INDONESIA N-Molukken Hiri Island 3km N Ternate 100-400m, 0°53'6"N, 127°20'E 22.I.2006 leg. A.Skale; Indonesia Halmahera NW 21km N Jailolo, Goal village, 100m, 1°14'11"N, 127°32'10"E 23.I.2006 leg. A. Skale plantage + riverside; 1 NME: IDO: Halmahera NW 7km S Jailolo, 200m 1°1'18"N, 127°31'39"E 27.I.2006 leg. A.Weigel; 1 NME: INDONESIA Halmahera S 2-3km N Dolik, Dolik river 0°15'49"N [sic!], 127°42'40"E 18.I.2006 leg. A.Weigel plantage + UWS; 1 NME: INDONESIA S-Halmahera ca. 6km S Dolik, 18'29"N [sic!] 127°44'45"E 19.I.2006 leg. A. Weigel plantage; 2 NME, 1 DTC: INDONESIA N-Molukken Bacan, Labuha, Flußtal 3km S, 12.I.2006, leg. A.Skale plantage + UWS; 1 NME: INDONESIA N-Molukken N-Bacan, Gorogoro 23'27"N [sic!], 127°36'33"E 16.I.2006 leg. A.Weigel; 2 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N

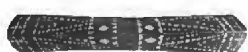


127°54'27,18"E, 09.IX.2007, plantations, beaten, leg. D.Telnov & K.Greke; 1 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 09.IX.2007, plantations, beaten from freshly cut partly dry branches, leg. D.Telnov & K.Greke; 2 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. S env., Tilope vill. 10-15 km SW, between Gunung Talaga mt. and Oham, 12.IX.2007, secondary lowland forest, beaten from freshly cut branches, leg. D.Telnov & K.Greke; 1 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 12.IX.2007, plantations, UV light, leg. D.Telnov & K.Greke; 5 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 12.IX.2007 beaten from dry leaves, roadside, between plantations, leg. D.Telnov & K.Greke; 2 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. S env., Tilope vill. 10-15 km SW, way from Gunung Talaga mt. to Oham, 14.IX.2007, primary lowland forest, beaten from branches, leg. D.Telnov & K.Greke; 1 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Wairoro vill. ~10 km W, Gunung Benteng mt. ridge, 0°12'20,19"N 127°48'44,87"E, 150-450 m, 18-20.IX.2007, primary rain forest, river valley, beaten, leg. D.Telnov & K.Greke; 1 DTC: INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Wairoro vill. ~10 km W, Gunung Benteng mt. ridge, 0°12'20,19"N 127°48'44,87"E, 150-450 m, 19.IX.2007, primary rain forest, small clearing, beaten, leg. D.Telnov & K.Greke.

Derivatio nominis: Named after its area of origin, North Moluccas or Maluku Utara in Bahasa Indonesia.

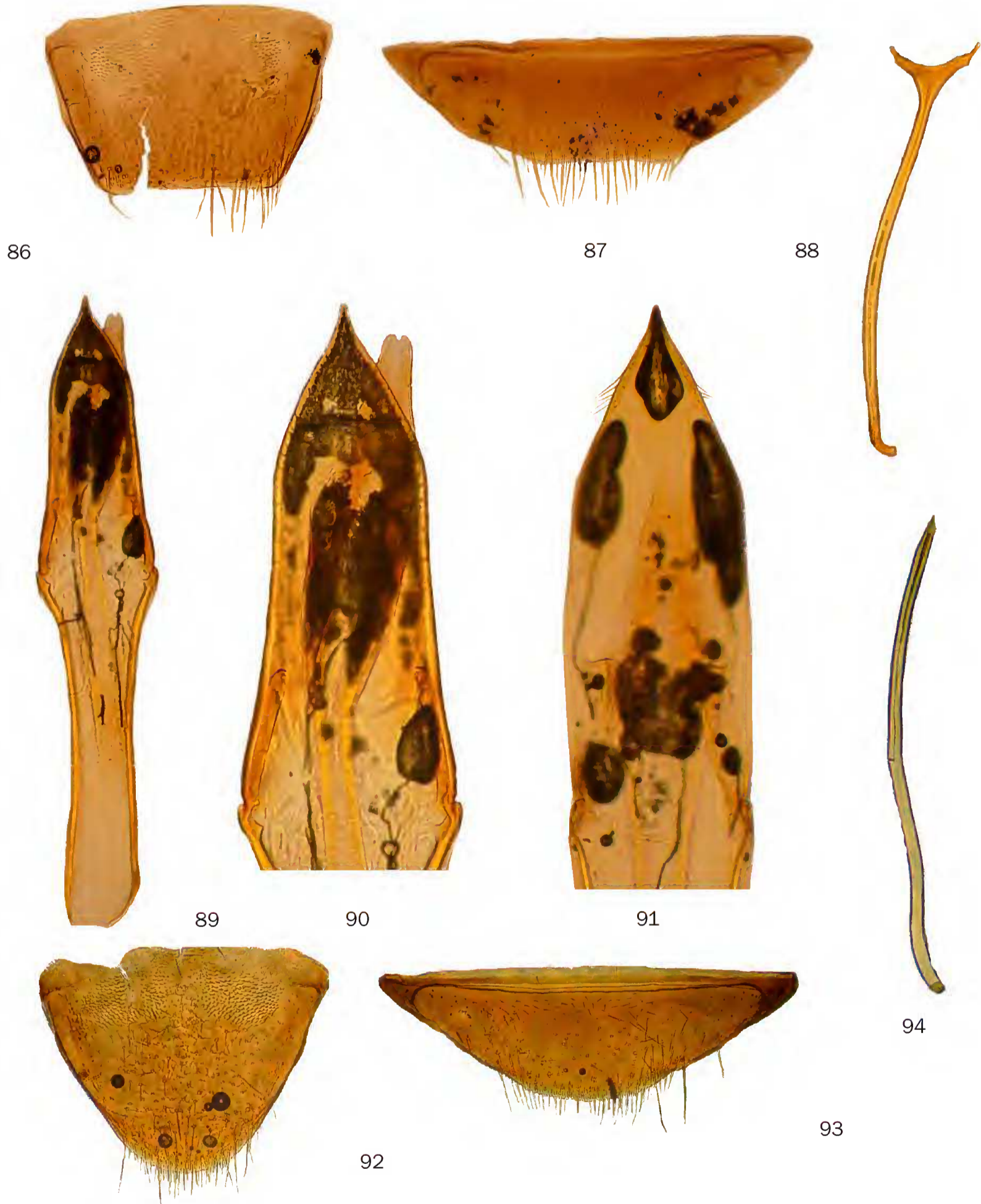
Measurements, holotype ♂: Total body length 2.75 mm, maximum combined width across the middle of elytra 0.90 mm. Head 0.60 mm long, across the eyes 0.51 mm broad, pronotum 0.55 mm long, maximum width 0.43 mm, elytra 1.60 mm long, 0.90 mm broad. Measurements, paratype ♀ from Central Halmahera, Tilope surroundings: Total body length 3.17 mm, maximum combined width across the middle of elytra 0.85 mm. Head 0.72 mm long, across the eyes 0.60 mm broad, pronotum 0.60 mm long, maximum width 0.51 mm, elytra 1.90 mm long, 0.85 mm broad.

Description: Forebody black (reddish-black in some paratype specimens), head somewhat paler at base, mouth parts orange. Elytra black with pale markings, consisting of orange postbasal and preapical transverse bands. The anterior band is complete or narrowly interrupted on the suture, bearing or not bearing the lateral margins of the elytra; in most specimens the anterior pale colouration is prolonged along the suture and bearing the base of the elytra. The posterior band is broadly interrupted along the suture, not bearing the lateral margin of the elytra. Basal antennomeres 2-4 orange, remaining antennomeres darkened. Legs black to brown, tibiae and tarsi somewhat paler. Underside brown to black-brown, trochanters and coxae paler coloured in some paratype specimens. Head opaque, with mid-sized and prominent eyes. Tempora broadly rounded together with base. Punctures flat, large, very dense and coarse, intervening spaces microreticulate, smaller than the punctures. Pubescence yellowish, fine and long, dense. Antennae slender, in both sexes reaching the postbasal transverse impression of the elytra. Second antennomere in male 1/4 shorter than the next one. Antennomeres 3-7 elongate and slender. Antennomeres 8-10 slightly shortened, of them 9-10 thickened distally. Terminal antennomere asymmetric, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axiform. Pronotum opaque dorsally, broadly rounded anteriorly, significantly narrower than the head, strongly constricted postmedium laterally toward narrow base. Very densely and coarsely punctured on the disc, intervening spaces much smaller than the punctures. Antero-lateral angles also opaque but less coarsely punctured. Pubescence yellowish, fine, long and dense, appressed, with several long erect tactile setae on the sides and on the disc. Scutellum narrowly triangular, pointed apically. Elytra elongate and slightly widened across the middle, smooth dorsally. Humeri rounded. Postbasal transverse impression feeble. Punctures large, getting much more flat in the apical third. Intervening spaces ranging from as large to twice as large as the punctures. Pubescence yellowish, long and dense, suberect, with numerous very long erect to suberect tactile setae present on the disc. Undersetae directed obliquely laterally. Sutural striae broad, completely developed. Hind wings fully developed. Legs long and slender. Both male and female metatibiae slightly thickened, but stronger in the female than in the male. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres.



Male basal tarsomere of the metathoracic legs distinctly thickened. Morphological tergite VII in male trapezoid, truncate on apical margin (Fig. 86). Morphological sternite VII in male very short, broadly rounded on apical margin (Fig. 87). Male aedeagus

with pointed tegmen (Figs 89-91). Morphological tergite VII in female narrowly rounded and densely setose on the apical margin (Fig. 92). Morphological sternite VII in female broadly rounded on apical margin (Fig. 93).



Figures 86-94. *Sapintus malut* sp. nov. 86-91: ♂ paratypes from Tilope surroundings, Central Halmahera, North Moluccas. 86 - Tergite VII; 87 - Sternite VII; 88 - Spiculum gastrale; 89 - Aedeagus; 90 & 91 - Tegmen of aedeagus. 92-94: ♀ paratype from Tilope surroundings, Central Halmahera, North Moluccas. 92 - Tergite VII; 93 - Sternite VII; 94 - Spiculum gastrale.



Sexual dimorphism: Metatibiae more strongly thickened in the female than in the male.

Variability: The size and shape of the pale elytral markings vary. Specimens vary in body length from 2.50 to 3.17 mm.

Ecology & biology: Specimens were collected during the hot and sunny daytime in both primary and strongly disturbed lowland rainforest, and also in gardens or small plantations. Specimens were beaten from dry or partly dry leaves of fresh or dry thin branches. One paratypic specimen was also attracted to UV light.

Differential diagnosis: Very close to *S. celeripes* sp. nov. (described above; Bird's Neck isthmus of New Guinea and Salawati Island of the Raja Ampat Islands), *S. geminus* sp. nov. (described above; Papua New Guinea: Madang Province), *S. horvathi* (Pic, 1902) (New Guinea & Central Moluccas), and *S. sexualis* sp. nov. (described below; Raja Ampat Islands). The tegmen of the aedeagus is narrowly pointed in new species and not spatulate like in *S. geminus*, or broadly and shortly pointed like in *S. horvathi*. The male morphological tergite VII is truncate apically (excavated in *S. sexualis*). The male morphological sternite VII is broadly rounded apically (feebly excavated in *S. sexualis*). The tegmen of the aedeagus is not pubescent preapically in *S. malut* sp. nov. (covered with a long pubescence in *S. celeripes*).

Distribution: This species is known from Northern Moluccas and hitherto registered from the islands of Halmahera, Ternate, Hiri and Bacan.

Remarks: An incorrect longitude is indicated on the original labels of some specimens from Bacan Island and the southern peninsula of Halmahera. N [North] is to be replaced with S [South], because the site is located in the Southern Hemisphere.

***Sapintus* (s. str.) *monstrosiantennatus* sp. nov.**

(Figs 95-98, map 5, plate 53 figs 5-6)

Holotype ♂ NME: 2c 030505 F [printed] ANTH 3 [handwritten] / Indonesia \ C.Sulawesi Kab. Dongala, Toro 1° 30'S, 120° 02'E alt. 750-1000 m fogging, leg. M.Bos [printed] / cacao plantation, planted Fabac shade, off T. cacao (sample code and date) F [printed] 03. V. [handwritten] 200[printed] 5[handwritten].

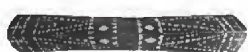
Derivatio nominis: Named from the Latin 'monstrum' [monster, miracle] + 'antenna' [antenna], because of the strongly modified male antennae.

Measurements, holotype ♂: Total body length 2.27 mm, maximum combined width across the middle of elytra 0.90 mm. Head 0.49 mm long, across the eyes 0.50 mm broad, pronotum 0.45

mm long, maximum width 0.41 mm, elytra 1.33 mm long, 0.90 mm broad.

Description: Head dark orange-brown, pronotum and elytra orange, the latest with narrowly black shoulders, a narrow and irregular black transverse midband and a broad brown preapical transverse band; both median and preapical bands not bearing the lateral margin of the elytra. Antennae, palpi and legs yellow. Underside in part orange, in part yellowish-brown. Head smooth and shiny dorsally, with large prominent eyes. Tempora almost straight, 1/3 shorter than the eye length, rounded on temporal angles. Base truncate. Punctures on the frons very large and dense, intervening spaces smaller than the punctures. The vertex is much more sparsely punctured. Pubescence yellowish, fine, long and sparse. Antennae heavy, reaching the elytral humeri in the male. Second antennomere in the male as long as the next one. Antennomeres 4-6 in male strongly shortened, 6th antennomere slightly transverse. Antennomeres 7-10 strongly enlarged and thickened, with 7th antennomere the longest and 10th the shortest among the four. Terminal antennomere asymmetric, blunt, conical, more than two times longer than the penultimate one. Terminal maxillary palpomere somewhat axiform. Pronotum trapezoid, dorsally smooth, broadly rounded anteriorly, significantly narrower than the head. Slightly narrowed postmedium laterally toward base. Punctures very large, dense and coarse, intervening spaces much smaller than the punctures. Pubescence yellowish, very long but quite sparse, appressed, with a few long erect setae on the sides and the disc. Scutellum broadly rounded apically. Elytra elongate, ovoid, smooth and shiny dorsally. Punctures very large, dense and coarse in the basal half, intervening spaces smaller than the punctures. In the apical third punctures get less coarse but not sparser. Pubescence yellowish, very long and dense, suberect. Undersetae sparse, directed obliquely laterally. Sutural striae narrow, developed in apical third only. Hind wings fully developed. Legs long and slender. Male protarsi very slightly thickened. Male mesotarsi as long as mesotibiae. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male short, truncate and finely densely setose on apical margin (Fig. 95). Morphological sternite VII in male short, very broadly rounded on apical margin (Fig. 96). Aedeagus of male almost parallel, tegmen slightly widened apically and with short thin and pointed apex (Figs 97-98).

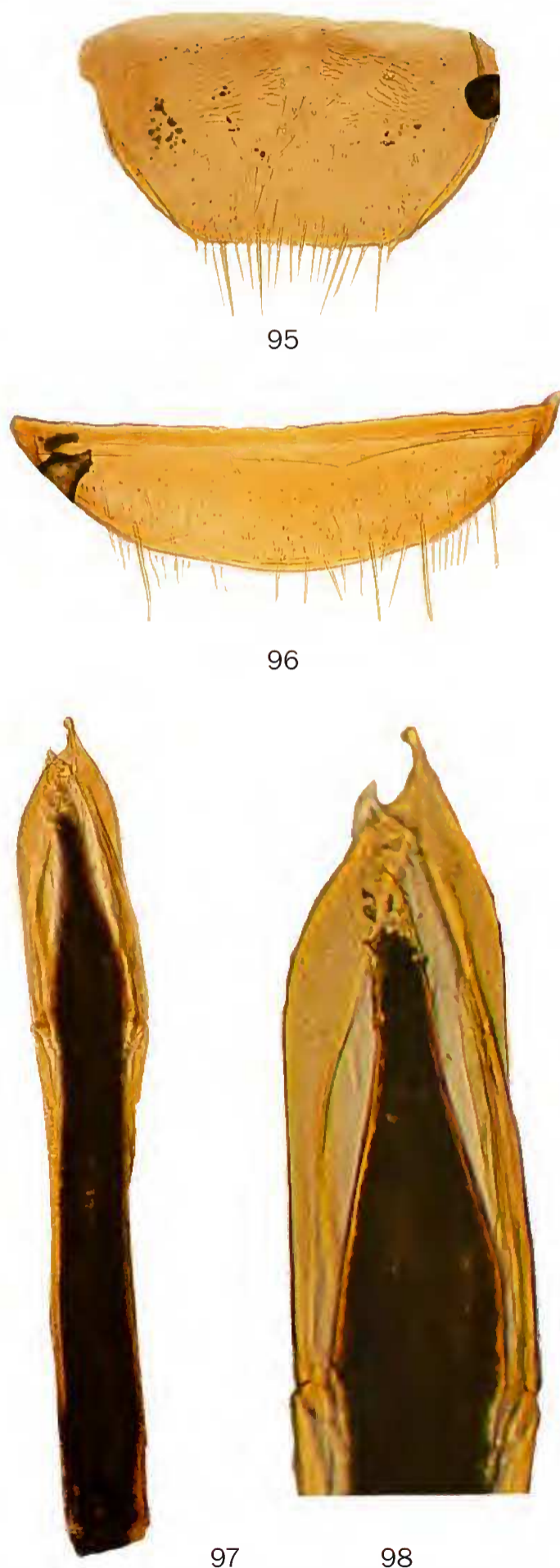
Sexual dimorphism: Female is unknown.



Ecology & biology: Collected on a plantation by fogging a cocoa tree (*Theobroma cacao*) at the elevation between 750-1000 m.

Differential diagnosis: Due to modifications of the male antennae, the general appearance looks very similar to *S. insignatipennis* (Pic, 1943) (South India), *S. plectilis* (Pic, 1910) (Southern and

Eastern China, India (except the West), Indonesia (Sulawesi), Taiwan, Thailand, Vietnam) and *S. pollocki* Uhmann, 1999 (Australia: Queensland). None of the three mentioned species have dark elytral markings like new species have. The tegmen of the aedeagus in *S. pollocki* is spatulate preapically and with a long thin apex; the tempora are somewhat longer and more rounded, the head base less strongly truncate. In *S. pollocki* the head base is more rounded, the sides of the pronotum stronger converging posteriad, the elytral punctures are comparatively less coarse. In *S. insignatipennis* the head is much finely and sparsely punctate, the penultimate antennomere very long and not shortened. Distribution: This species is known from Central Sulawesi.



Figures 95-98. *Sapintus monstrosiantennatus* sp. nov., holotype ♂. 95 - Tergite VII; 96 - Sternite VII; 97 - Aedeagus; 98 - Tegmen of aedeagus.

Sapintus* (s. str.) *oceanicus (LaFerté-Sénéctère, 1849a) (Figs 99-107, plate 54 figs 2-6)
 = *Anthicus oceanicus* LaFerté-Sénéctère, 1849b [duplicative description]
 = *Anthicus oceanicus* var. *Françoisi* Pic, 1902 [consider new synonymy above]
 = *Anthicus oceanicus* var. *guamensis* Blair, 1942

Type material: Not studied for nominate form.

Syntype ♂ *Anthicus oceanicus* var. *guamensis* BMNH: Type [printed, label circular, border red] / R.L.Usinger Collector [printed] / Yona, Guam [printed] 5-12-36 [handwritten] / ex pigeon pea [handwritten] / Pres.by Imp.Inst.Ent. B.M.1940- [printed] 52 [handwritten] / *Anthicus oceanicus* Laf. v. *guamensis* Blr. [handwritten] det.K.G.Blair. [printed] Type [handwritten].

Additional material: 18 specimens [15 BMNH, 3 DTC]: FIJI IS. Taveuni. Waiyevo. [printed] 5.VI.24. At light. 1498-24. [handwritten] Dr.H.S.Evans. [printed] / Pres.by Imp.Inst.Ent. B.M.1932- [printed] 412. [handwritten] / *A. oceanicus* var. *Francoisi* Pic [handwritten] Dr. R. F. Heberdey [printed]; New Hebrides: Malekula, Ounua, Feb.1929. Miss L.E.Cheesman. B.M.1929-280.; 1 specimen BMNH: New Hebrides: Malekula, Ounua. Mar.&Apl.1929. Miss L.E.Cheesman. B.M.1929-343.; 4 specimens BMNH: New Hebrides: Malekula, Ounua, iv.v.1929. Miss L.E.Cheesman. B.M.1929-371.; 3 specimens BMNH: New Hebrides: Malekula. Malua Bay. v.1929. Miss L.E.Cheesman. B.M.1929-410. / 605; 1 specimen BMNH: New Hebrides: Malekula. Malua Bay. vi.1929. Miss L.E.Cheesman. B.M.1929-410.; 1 specimen BMNH: New Hebrides: Santo. viii.1929. Miss L.E.Cheesman. B.M.1929-343.; 1 specimen BMNH: New Hebrides: Banks Is. Vanua Lava. xi.1929. Miss L.E.Cheesman. B.M.1930-8.; 4 specimens BMNH: New Hebrides: Malekula. v.1930. Miss L.E.Cheesman. B.M.1930-393.; 2 specimens BMNH: ONTONG JAVA:



Leuantua. 29.ix.1953. J.D.Bradley / RENNELL I. Expedition. B.M.1954-222.; 1 specimen BMNH: SOLOMON IS. Isabel 2/8. 1962 P. GREENSLADE 2413. / SOLOMON IS: Pres. P.J.M.Greenslade. B.M.1966-477.; 2 specimens ZMUC: Cook Is., Aitutaki, II.1977, N.L.H.Krauss leg.; 4 specimens [2 ZMUC, 2 DTC]: Cook Is., Aitutaki, XII.1977, N.L.H.Krauss leg.; 1 specimen NME: W-PAPUA Raja Ampat Prov. Salawati Isl. or., Kalobo 01° 03' 15" S, 131° 04' 32" E 24.-28.I.2004 leg. A.Skale.

This redescription is based on a male specimen from Malekula Island, Vanuatu.

Measurements, ♂ from Vanuatu: Total body length 3.12 mm, maximum combined width post-medium of elytra 0.86 mm. Head 0.62 mm long, across the eyes 0.60 mm broad, pronotum 0.60 mm long, maximum width 0.50 mm, elytra 1.90 mm long, 0.86 mm broad. Measurements, ♀: Total body length 3.35 mm, maximum combined width across the middle of elytra 1.10 mm. Head 0.65 mm long, across the eyes 0.65 mm broad, pronotum 0.65 mm long, maximum width 0.57 mm, elytra 2.05 mm long, 1.10 mm broad.

Description: Forebody black, reddish brown or orange, head sometimes darker than the pronotum. Elytra black to brown with orange or yellow markings, consisting of a broad postbasal transverse band not or narrowly interrupted on the suture and a broad, somewhat slightly oblique or oval spot in the apical third of each elytron. Antennae and palpi brown, orange or yellow. Legs pale with a dark femora. Underside uniformly brown, yellow or orange, abdominal ventrites somewhat darker. Head very densely punctured, with large prominent eyes. Tempora short, with rounded temporal angles. Head base truncate. Punctures small and very dense, intervening spaces much smaller than punctures. Pubescence whitish, fine, sparse. Antennae long and slender, reaching over the elytral humeri in the male. Second antennomere 1/3 shorter than the next one. Antennomeres 3-8 elongate, slightly thickened distally. Antennomeres 9-10 stronger, thickened distally. Terminal antennomere slightly asymmetric, elongate, conical, blunt, indistinctly longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum very densely punctured dorsally, flattened, broadly rounded anteriorly, narrower than the head. Narrowed postmedium laterally toward base. Punctures very dense but flat, intervening spaces much smaller than punctures. Pubescence whitish, fine, sparse and appressed, with several long erect tactile setae on the sides and on the disc. Scutellum truncate apically. Elytra elongate, smooth dorsally.

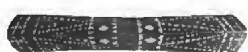
Punctures large, coarse and dense, getting smaller but not much sparser in the apical third. Intervening spaces irregular but all smaller than the punctures. Pubescence yellowish, fine, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae visible from apices toward basal third. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in the male broadly rounded on apical margin (Fig. 99). Morphological sternite VII in the male short and broad, broadly rounded on apical margin (Fig. 100). Aedeagus pointed, laterally with sparse and very short setae (Figs 102-103). Morphological tergite VII (Fig. 104) - as well as sternite VII - broadly rounded on the apical margin in the female (Figs 105-106).

Sexual dimorphism: Almost not indicated. Females have a slightly more slender profemora than males.

Variability: This species varies in main body colouration from orange to black, and the pale markings of the elytra vary from reddish to yellow. The pale markings of the elytra vary in size; they can also be more or less isolated (interrupted) on the suture. The specimens also significantly vary in body length from 2.50 mm to 3.65 mm (partly from Werner, 1965). The intervening spaces on the head vary strongly in size. In some specimens these are visible and smooth intervening spaces, in other specimens intervening spaces are rugulose and much smaller than the punctures.

Distribution: This species is widely distributed in the Pacific and on some Indian Islands, hitherto recorded as surely known from the Marquesas Islands, Caroline Islands, Cook Islands, Fiji, French Polynesia, Gilbert Islands, Guam Island, Leuantua Atoll (Ontong Java plateau, N of the Solomon Islands), Mariana Islands, Marshall Islands, New Caledonia, Ocean Islands, Palau, Society Islands, Vanuatu, Northern and Eastern Australia, Comoros Islands, India, Indonesia (Borneo, Krakatau, Mentawai, Raja Ampat), Japan (Ryukyu Islands), Kenya (coastal areas), Madagascar, Mascarene Islands (both Mauritius & La Réunion), Sri Lanka, Seychelles, Solomon Islands, Somalia (coastal areas), South African Republic (coastal areas), Tanzania (coastal areas), Thailand, Vietnam.

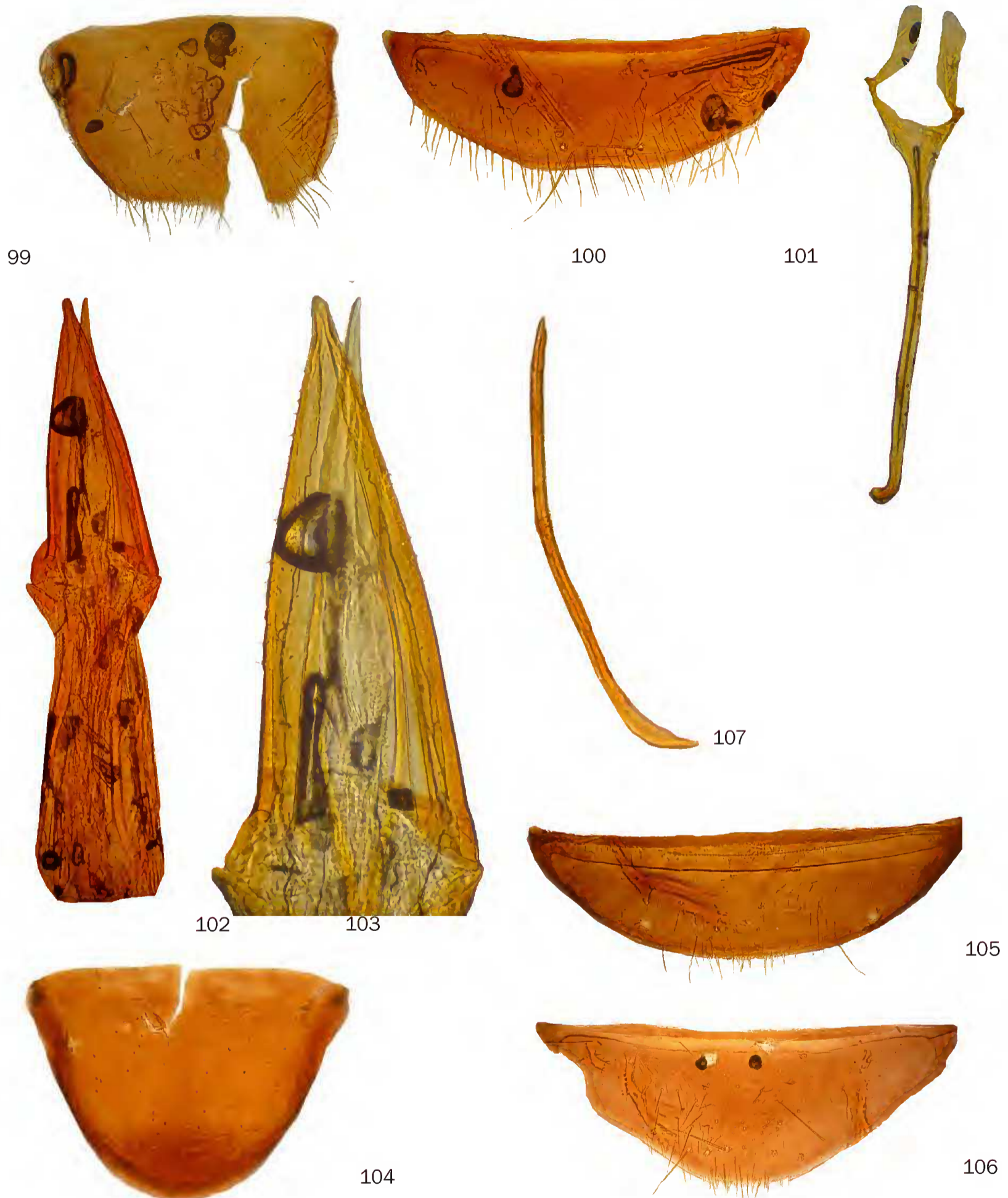
Remarks: Werner (1965: 261) points to the intervening spaces on the head being smooth and shiny, as large as the punctures. In fact, in many specimens (like Vanuatu's specimen, redescribed above, of Fiji specimens from BMNH) the head and



pronotal disc punctures are extremely dense, not leaving any visible intervening spaces.

Sapintus* (s. str.) *papuus (Pic, 1900) (Figs 108-111, map 3, plate 55 figs 1-3)

Lectotype ♀ MSNG [herewith designated]: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / Typus [printed, text red, red border] / *papuus* Pic [printed, black border]



Figures 99-107. *Sapintus oceanicus* (LaFerté-Sénéctère, 1849a). 99-103: ♂ from Vanuatu. 99 - Tergite VII; 100 - Sternite VII; 101 - Spiculum gastrale; 102 - Aedeagus; 103 - Tegmen of aedeagus. 104-107: ♀♀ specimens. 104 - Tergite VII (Vanuatu); 105 & 106 - Sternite VII (Vanuatu & Santa Isabel Island, Solomon Islands); 107 - Spiculum gastrale (Vanuatu).



der] / *Anthicus papuus* Pic typus ! [handwritten] / Mus. Civ. Genova [printed].

Paralectotypes 25 specimens [herewith designated]: 20 specimens MSNG: same label as in the lectotype; 1 specimen MNHN: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / type [handwritten] / TYPE [printed, label red] / *A. papuus* Pic [handwritten]; 1 specimen MNHN: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / type [handwritten] / *A. papuus* Pic [handwritten]; 3 specimens MNHN: N.Guinea Dilo Loria VI.VII.90 [printed, black border] / type [handwritten].

Measurements, paralectotype ♂: Total body length 3.13 mm, maximum combined width across the middle of elytra 0.95 mm. Head 0.68 mm long, across the eyes 0.66 mm broad, pronotum 0.60 mm long, maximum width 0.58 mm, elytra 1.80 mm long, 0.95 mm broad. Measurements, lectotype ♀: Total body length 3.11 mm, maximum combined width across the middle of elytra 1.02 mm. Head 0.61 mm long, across the eyes 0.69 mm broad, pronotum 0.61 mm long, maximum width 0.56 mm, elytra 1.89 mm long, 1.02 mm broad.

Description: Head black to brown. Prothorax reddish-brown to brown. Elytra brown, with reddish-brown markings in the form of very broad postbasal and preapical transverse spots, both very narrowly interrupted on the suture and not bearing lateral margins. Antennae reddish-brown to brown, two basal antennomeres paler. Maxillary palpi yellowish-brown. Legs brown or yellow with darkened tibiae. Underside uniformly brown to black-brown. Head very densely punctured dorsally, with mid-sized prominent eyes. Tempora about half the size of the length of an eye, with rounded temporal angles and a very broadly rounded base. Punctures small, very dense and flat. Intervening spaces microstriate and smaller than punctures. Pubescence greyish, fine and dense. Antennae short, reaching the elytral humeri in the male. Second antennomere short, half shorter than the next one in the male. Antennomeres 7-10 thickened distally. Terminal antennomere slightly asymmetric, bluntly conical, indistinctly longer than the penultimate one. Terminal maxillary palpomere somewhat axiform. Pronotum very densely punctured dorsally, rounded anteriorly, significantly narrower than the head, narrowed postmedium laterally toward base. Punctures large and dense, intervening spaces mostly smaller than the punctures. Pubescence greyish, fine, long and dense, appressed and covering the sculpture of the disc, with separate long erect setae on the sides and the disc. Scutellum broadly rounded apically. Elytra elongate. Punctures large

in the basal half, the intervening spaces ranging from smaller than to as large as the punctures. In the apical half, punctures getting smaller and more flat, intervening spaces here mostly larger than punctures. Pubescence greyish, long and dense, appressed. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward middle. Hind wings fully developed. Legs long. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male long, rounded on apical margin (Fig. 108). Morphological sternite VII in male with feeble median excavation on apical margin (Fig. 109). Male aedeagus with tegmen very narrow and strongly prolonged apically (Figs. 110-111).

Sexual dimorphism: Not indicated.

Variability: This species varies in dorsal colouration and in the shape of the pale markings of the elytra, as described above.

Distribution: This species is known from the surrounding areas of Dilo village in Central Province, Papua New Guinea.

Sapintus* (s. str.) *plectilis (Pic, 1910) (Figs 112-118, plate 56 figs 7-8)

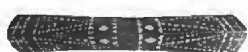
Type material: Not studied.

Additional material: 2 specimens OUNH: Celeb Wallace / Coll (1830-73) W W Saunders Ex coll. H.E. Cox id.1916 Mrs. Cox / Hope Entomological Collection Ex. Cabinet 6, drw 9.

This redescription is based on a male specimen from Tiammu Shan, Zhejiang, Southern China.

Measurements, ♂: Total body length 2.50 mm, maximum combined width across the middle of elytra 1.00 mm. Head 0.55 mm long, across the eyes 0.53 mm broad, pronotum 0.50 mm long, maximum width 0.45 mm, elytra 1.45 mm long, 1.00 mm broad. Measurements, ♀: Total body length 2.42 mm, maximum combined width postmedium of elytra 0.90 mm. Head 0.57 mm long, across the eyes 0.52 mm broad, pronotum 0.45 mm long, maximum width 0.46 mm, elytra 1.40 mm long, 0.90 mm broad.

Description: Dorsum and venter uniformly yellow or pale yellow-brown, the forebody often orange. Antennae, palpi and legs paler. Elytra in some specimens with an indistinct oval postmedian dark spot on the suture. Head smooth and shiny dorsally, with mid-sized prominent eyes. Tempora slightly shorter than the eye length, with rounded temporal angles. Base truncate to subtruncate. Punctures large and dense, intervening spaces smaller than



punctures. Pubescence yellowish, fine and sparse. Antennae heavy, in both sexes reaching the elytral humeri. Second antennomere in both sexes as long as the next one. Antennomeres 4-6 in male strongly shortened, 6th antennomere transverse. Antenno-



108



109



110



111

Figures 108-111. *Sapintus papuus* (Pic, 1900), holotype ♂. 108 - Tergite VII; 109 - Sternite VII; 110 - Aedeagus; 111 - Tegmen of aedeagus.

meres 7-10 strongly enlarged and thickened, with 7th antennomere the longest and 10th the shortest among the four. Penultimate antennomere in male is short, transverse. Terminal antennomere asymmetric, bluntly conical, twice longer than the penultimate one. In the female, there are no modified antennomeres. Terminal maxillary palpomere somewhat axeform. Pronotum dorsally smooth, broadly rounded anteriorly, narrower than head. Constricted postmedium laterally toward base. Punctures dense and coarse, intervening spaces much smaller than punctures. Pubescence yellowish, fine, long and sparse, appressed, with separate long erect setae on the sides and the disc. Scutellum broadly rounded apically. Elytra elongate ovoid, smooth and shiny dorsally. Punctures large and coarse in the basal half, intervening spaces smaller than punctures. In the apical third, punctures getting finer but not sparser. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae broad, developed in the apical third only. Hind wings fully developed. Legs long and slender. Male mesotarsi as long as mesotibiae. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male excavated on apical margin (Fig. 112). Morphological sternite VII in male short and broad, broadly rounded on apical margin (Fig. 113). Aedeagus of male short, slightly spatulate-like, widened in apical part, with thin prolongate apex (Figs 115-116). Morphological tergite VII in female large, narrowly rounded on apical margin (Fig. 117). Morphological sternite VII in female short and very broad, broadly rounded on apical margin (Fig. 118).

Sexual dimorphism: Females with antennomeres 7-9 not enlarged and 4-6 not unusually small.

Variability: Some specimens have a weakly defined dark postmedian spot on the suture. Body length varies from 2.20 to 2.80 mm.

Ecology & biology: Young (1984), Hemp (1994) and Hemp & Dettner (2001) listed this species among canthariphilous Anthicidae. This species is easy recognizable among other Oriental *Sapintus*, consequently it is highly possible that it was identified correctly.

Distribution: This species is widely distributed on the Asian mainland and hitherto recorded in Southern and Eastern China, India, Taiwan, Thailand, and Vietnam. Records from Sulawesi are the only from the insular systems of SE Asia. It is not impossible that historical specimens (OUNH) are mislabelled.



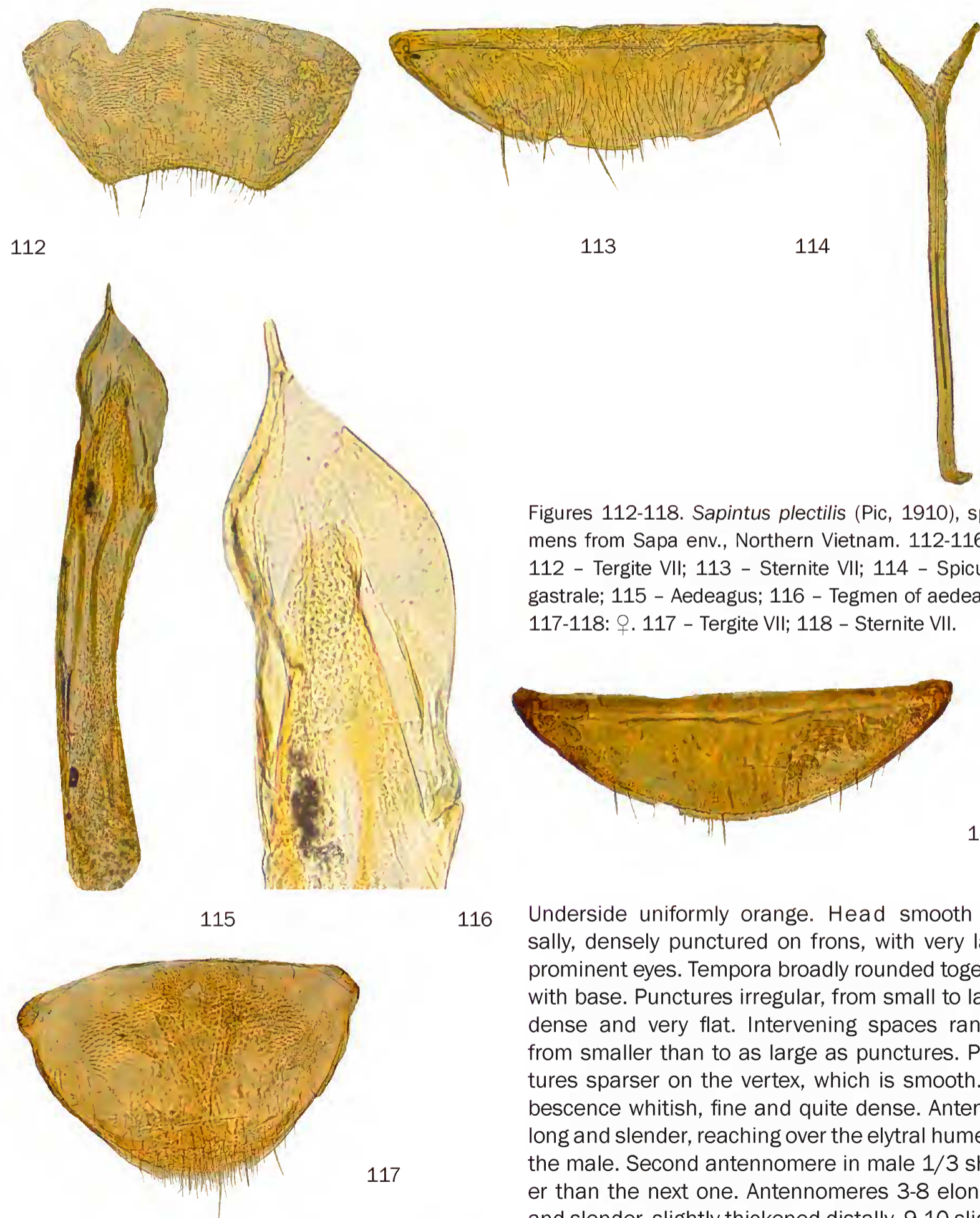
Sapintus* (s. str.) *quadrinotatus (Pic, 1900) (Figs 119-121, map 3, plate 56 figs 1-2)

Holotype ♂ MSNG: N.Guinea Ighibirei Loria VII.VIII.90 [printed, black border] / Typus [printed, text red, red border] / *quadrinotatus* Pic [handwritten, black border] / *A. quadrinotatus* Pic n sp [handwritten] / Mus. Civ. Genova [printed].

Measurements, holotype ♂: Total body length

3.12 mm, maximum combined width immediately behind the middle of elytra 0.99 mm. Head 0.61 mm long, across the eyes 0.61 mm broad, pronotum 0.60 mm long, maximum width 0.51 mm, elytra 1.93 mm long, 0.99 mm broad.

Description: Forebody orange. Elytra yellow or pale orange with brown markings in the form of five narrow and irregularly shaped transverse bands. Antennae and palpi orange, legs slightly paler.



Figures 112-118. *Sapintus plectilis* (Pic, 1910), specimens from Sapa env., Northern Vietnam. 112-116: ♂. 112 - Tergite VII; 113 - Sternite VII; 114 - Spiculum gastrale; 115 - Aedeagus; 116 - Tegmen of aedeagus. 117-118: ♀. 117 - Tergite VII; 118 - Sternite VII.

Underside uniformly orange. Head smooth dorsally, densely punctured on frons, with very large prominent eyes. Tempora broadly rounded together with base. Punctures irregular, from small to large, dense and very flat. Intervening spaces ranging from smaller than to as large as punctures. Punctures sparser on the vertex, which is smooth. Pubescence whitish, fine and quite dense. Antennae long and slender, reaching over the elytral humeri in the male. Second antennomere in male 1/3 shorter than the next one. Antennomeres 3-8 elongate and slender, slightly thickened distally, 9-10 slightly



shortened, thickened distally. Terminal antennomere slightly asymmetric, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum very densely punctured on the disc, smooth and shiny on antero-lateral angles, rounded anteriorly, significantly narrower than the head. Strongly constricted postmedium laterally toward narrow base. Punctures on disc small but very dense and coarse, intervening spaces much smaller than punctures. Pubescence whitish, fine, long and dense, appressed and covering sculpture of disc, with separate long erect setae on the sides and the disc. Scutellum rounded apically. Elytra elongate, smooth dorsally. Humeral angles strongly rounded. Punctures large and sparse in basal half, intervening spaces ranging from as large to two times larger than punctures. In the apical half punctures getting smaller, intervening spaces here mostly larger than punctures. Pubescence yellowish, long and sparse, appressed. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Male metatibiae slightly thickened. Male basal tarsomere of the metathoracic legs longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII and sternite VII were not studied. Aedeagus with

narrowly rounded apex (Figs 119-121).

Sexual dimorphism: Female is unknown.

Distribution: This species was originally collected at Ighibieri (= Igibira) village in Western Province, Papua New Guinea. Later, it was recorded from Friedrich-Wilhelm Harbour (Madang Province) and from the surroundings of Port Moresby (Central Province). A record from New South Wales, Australia (Uhmann 2000) seems outside of the species' range and very dubious, and needs further confirmation.

Sapintus* (s. str.) *rugosicollis (Pic, 1900) (Plate 56 figs 3-4)

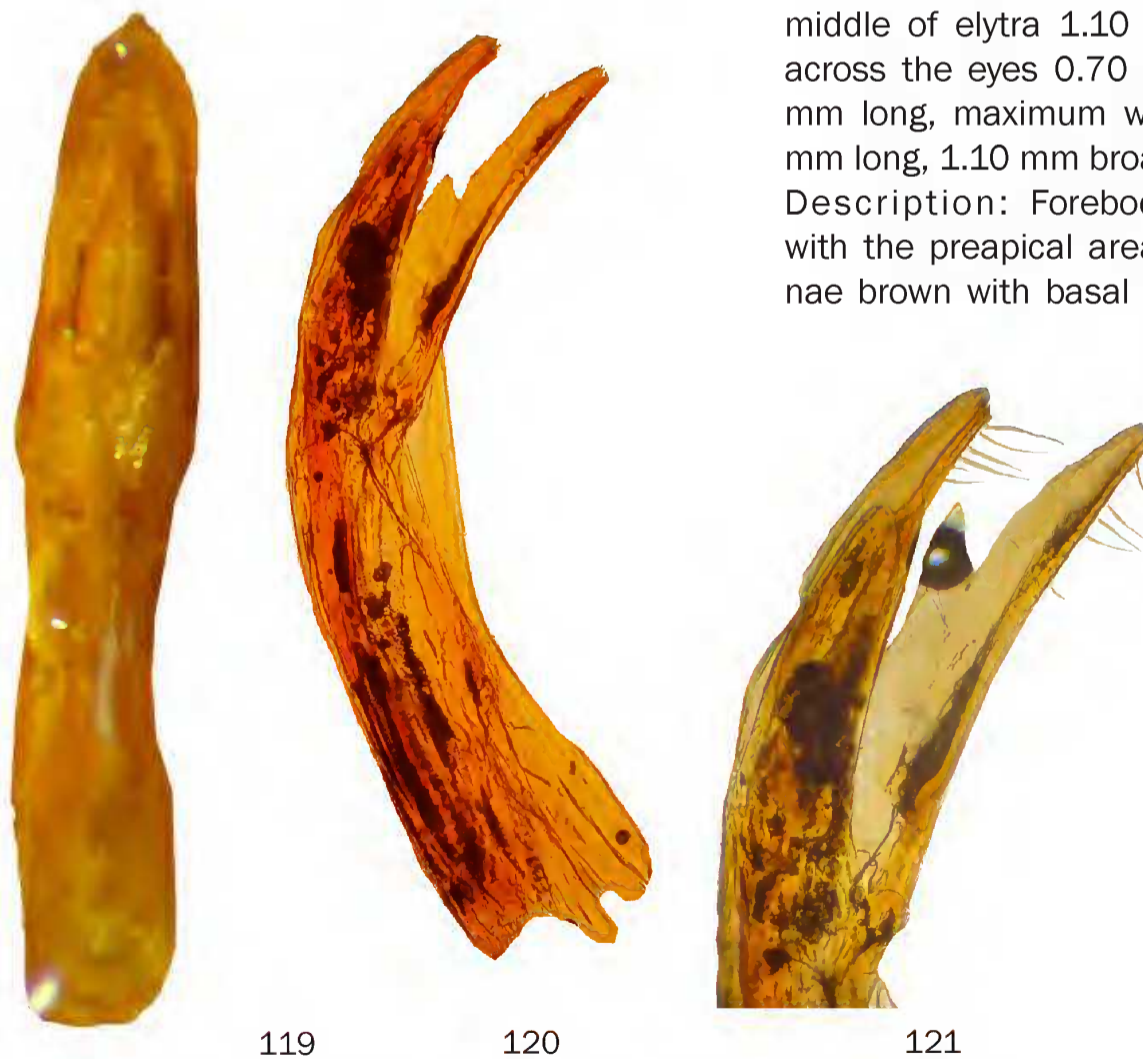
Lectotype ♀ MSNG [herewith designated]: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / Typus [printed, text red, red border] / *rugosicollis* Pic [handwritten, black border] / *A. rugosicollis* Pic n sp. [handwritten] / Mus. Civ. Genova [printed].

Paralectotypes 2 specimens MNHN [herewith designated]: Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / type [handwritten] / TYPE [printed, label red] / *rugosicollis* Pic [handwritten]; Nuova Guinea Fly River L.M.D'Albertis 1876-77 [printed, black border] / type [handwritten].

Measurements, lectotype ♀: Total body length 3.12 mm, maximum combined width across the middle of elytra 1.10 mm. Head 0.57 mm long, across the eyes 0.70 mm broad, pronotum 0.62 mm long, maximum width 0.51 mm, elytra 1.99 mm long, 1.10 mm broad.

Description: Forebody red, elytra black-brown with the preapical area very slightly paler. Antennae brown with basal antennomere pale reddish.

Palpi and legs brown, latest with reddish femora. Underside brown, procoxae- and trochanters red. Head very densely punctured dorsally, with large prominent eyes. Tempora 1/3 shorter than the length of an eye, temporal angles rounded. Head base truncate. Punctures small and flat but very dense. Intervening spaces much smaller than punctures. Pubescence white, fine, short and sparse. Antennae slender, reaching slightly over the elytral humeri in



Figures 86-94. *Sapintus quadrinotatus* (Pic, 1900), holotype ♂. 119 – Aedeagus, dorsal view; 120 – Aedeagus, lateral view; 121 – Tegmen of aedeagus, lateral view.



the female. Second antennomere in female almost half shorter than the next one. Antennomeres 3-8 elongate and slender, slightly thickened distally. Penultimate antennomere slightly shortened and indistinctly thickened. Terminal antennomere asymmetric, bluntly conical, 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum very densely punctured dorsally, rounded anteriorly, significantly narrower than the head. Constricted from the anterior third laterally toward the base. Punctures larger than on the head but flat, intervening spaces much smaller than the punctures. Pubescence whitish, fine, short and sparse, appressed. Some hairs look like slender elongate scales, especially near the base of the pronotum, with separate long erect setae on sides and disc. Scutellum triangular. Elytra elongate, densely coarsely punctured dorsally. Punctures large and dense, not or almost not getting smaller toward apices. Intervening spaces irregular in size, smaller than the punctures. Pubescence greyish, short and sparse, appressed. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs long and slender. Female basal tarsomere of the metathoracic legs longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in female broadly rounded on apical margin. Morphological sternite VII in female was not studied.

Sexual dimorphism: Male not studied.

Distribution: This species is only known by the holotype collected by L.M. D'Albertis on the River Fly in the southern lowlands of Papua New Guinea and without precise locality. D'Albertis reached up to 580 miles (~937 km) upriver during his expedition. Consequently, the locus typicus of this species is somewhere between the delta and 937 km of the River Fly course.

Sapintus (s. str.) ***semirugosus*** (Pic, 1902) (Figs 122-124, plate 57 figs 1-3)

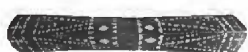
Holotype ♂ HMNH: N. Guinea Biró 1898 [printed] / Stephansort Astrolabe Bai [sic!] [printed] / Momo - [handwritten] typus [printed, text red] 1902 *Anthicus semirugosus* Pic [handwritten] [label border red] / *A. semirugosus* Pic n sp. [handwritten, by M.Pic] / *Anthicus semirugosus* Pic [handwritten] det. M. Pic [printed] Typus ! [handwritten, text red].

Additional material: 1♂ DTC: N. Guinea Biró 1898 [printed] / Stephansort Astrolabe Bai [sic!] [printed] / 3108 [printed] / *A. dilensis* Pic [handwritten].

Measurements, holotype ♂: Total body length

2.75 mm, maximum combined width across the middle of elytra 0.90 mm. Head 0.61 mm long, across the eyes 0.60 mm broad, pronotum 0.49 mm long, maximum width 0.51 mm, elytra 1.65 mm long, 0.90 mm broad.

Description: Forebody red. Elytra black to reddish brown with orange or yellow markings consisting of a broad postbasal transverse band narrowly interrupted on the suture and a narrower oblique transverse spot in the apical third of each elytron. The upper margin of the preapical spot is not straight. Antennae pale on 3-4 basal antennomeres, rest of antennae darkened. Legs orange or yellow, femora darker than tibiae. Underside with red to reddish brown thorax, brown abdominal ventrites and orange last visible tergite. Head very densely punctured, with midsized prominent eyes. Tempora straight, with rounded temporal angles, slightly shorter than the eye length. Head base truncate. Punctures of different sizes but very dense and flat, intervening spaces much smaller than punctures. Especially on the frons, intervening spaces between large punctures are covered by small and dense punctures. Pubescence yellowish, fine, sparse. Antennae long, reaching over the elytral humeri in the male. Second antennomere slightly shorter than the next one. Antennomeres 3-7 elongate, slightly thickened distally. Antennomeres 8-10 shorter and thickened. Terminal antennomere elongate, conical, pointed, 1/4 longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum very densely punctured dorsally, flattened, broadly rounded anteriorly, narrower than the head. Strongly constricted postmedium laterally toward base. Punctures large and very dense, but flat. Intervening spaces smaller than punctures, rugulose. Pubescence yellowish, fine, sparse and appressed, with several long erect tactile setae on the sides and on the disc. Scutellum triangular. Elytra elongate. Punctures large, coarse and dense, getting smaller and sparser in apical third. Intervening spaces irregular, in the basal part mostly smaller than or as large as the punctures, in the preapical part up to three times larger than the punctures. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae almost complete, visible from apices toward postbasal fourth. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male broadly rounded on apical margin, covered with very long setae (Fig. 122). Morphological sternite





Figures 122-124. *Sapintus semirugosus* (Pic, 1902), holotype ♂. 122 - Tergite VII; 123 - Sternite VII; 124 - Aedeagus.

VII in male broadly rounded on apical margin, covered with very long setae (Fig. 123). Aedeagus with tegmen tapered apically (Fig. 124).

Sexual dimorphism: Female is unknown.

Distribution: This species is only known from the type locality, Stephansort, in Madang Province, Papua New Guinea.

***Sapintus* (s. str.) *sexualis* sp. nov.** (Figs 125-132, map 3, plate 57 figs 4-5)

Holotype ♂ NME: W-PAPUA Raja Ampat Pr. Waywesar/Batanta, 2km E 45'17"S, [sic!] 130°48'06"E 18.I.2004 leg.A.Weigel.

Paratypes 9 specimens. 1♂ & 1♀ NME, 1♂ DTC: same labels as in holotype; 1♂ & 2♀ NME, 1♀ DTC: W-PAPUA Raja Ampat Pr. Waywesar/Batanta bor. 0°45'26"S, 130°46'55"E 13.I.2004 leg.A.Weigel; 1♀ NME: W-PAPUA Raja Ampat Prov. Batanta Isl. bor., Waywesar 0°45'26"S, 130°46'55"E 15.I.2004 leg. A.Skale UWP; 1♀ NME: W-PAPUA Raja Ampat Prov. Batanta Isl. mer., Wallebet 0°54'01"S, 130°39'37"E 18.-21.I.2004 leg. A.Skale; 1 specimen NME: W-PAPUA Manokwari Prov. vic. Mokwam (Siyoubbrig), 1400-1800m, 01°06.26'S 133°54.41'E, 24.-28.II.2007 leg. A. Skale; 1 specimen NME, 1 specimen DTC: W-PAPUA Manokwari Prov.24km SSE Manokwari, Warami 01°10.50'S 134°09.16'E, 02.III.2007 leg. A. Skale; 1 specimen NME: W-PAPUA Manokwari Pr. 14km NE Ransiki, Warbiatu (Oransbari), 01°18.25'S 134°14.14'E, 02.III.2007 leg. A.Weigel

cut. area; 2 specimens NME: W-PAPUA Manokwari Prov. 18km NE Ransiki, 01°21.05'S 134°12.46'E, 02.-08. III.2007 leg. A. Skale cutting area.

Derivatio nominis: Named from Latin 'sexualis' [female, female sex], because of the distinctly thickened female metatibiae.

Measurements, holotype ♂: Total body length 3.15 mm, maximum combined width across the middle of elytra 0.92 mm. Head 0.68 mm long, across the eyes 0.61 mm broad, pronotum 0.60 mm long, maximum width 0.57 mm, elytra 1.87 mm long, 0.92 mm broad. Measurements, paratype ♀: Total body length 2.41 mm, maximum combined width across the middle of elytra 0.78 mm. Head 0.56 mm long, across the eyes 0.48 mm broad, pronotum 0.45 mm long, maximum width 0.41 mm, elytra

1.40 mm long, 0.78 mm broad.

Description: Forebody brown to orange, head usually darker. Elytra black with pale markings, consisting of an orange broad postbasal transverse band and a broad transverse spot in the apical third of each elytron. Anterior band is bearing the lateral margin of the elytra and is not interrupted on the suture. Posterior spots not bearing lateral margin and are distinctly interrupted on the suture. Antennae and palpi yellow to orange, antennomeres 5-11 usually slightly darkened. Legs yellow with slightly darkened metatibiae. Underside reddish-brown to brown, pro- and mesocoxae yellow. Head opaque, with large prominent eyes, very densely and coarsely punctured. Tempora slightly prolonged, narrowly rounded together with base. Punctures flat, very dense, intervening spaces smaller than punctures. The vertex is much sparser, smooth and shiny. Pubescence yellowish, fine and long. Antennae in both sexes reaching the elytral humeri. Second antennomere in male 1/4 shorter than the next one. Antennomeres 3-7 elongate, slightly thickened distally. Antennomeres 9-10 shortened and stronger, thickened distally. Terminal antennomere tapered 1/4 longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum broadly rounded anteriorly, significantly narrower than the head, strongly constricted postmedium laterally toward narrow base. Very densely and confusedly punctured on disc,



intervening spaces much smaller than the punctures. Antero-lateral angles smooth, dense but not coarsely punctured. Pubescence yellowish, fine, long and dense, appressed, with several long erect tactile setae on the sides and on the disc. Scutellum triangular, narrowly rounded apically. Elytra

elongate and slightly widened across the middle, smooth dorsally. Humeri rounded. Postbasal transverse impression feeble. Punctures large, getting smaller in the apical third. Intervening spaces mostly smaller than punctures. Pubescence yellowish, long and dense, suberect, with numerous very



Figures 125-132. *Sapintus sexualis* sp. nov. 125-130: ♂♂ paratypes from Manokwari env., Indonesian New Guinea. 125 - Tergite VII; 126 - Sternite VII; 127 - Spiculum gastrale; 128 & 129 - Aedeagus; 130 - Tegmen of aedeagus. 131-132: ♀ paratype from Manokwari env., Indonesian New Guinea. 131 - Tergite VII; 132 - Sternite VII.



long erect to suberect tactile setae present on the disc. Undersetae directed obliquely laterally. Sutural striae broad, completely developed. Hind wings fully developed. Legs stout. Metatibiae thickened in both sexes, but much stronger in females rather than in males. Basal tarsomere of the metathoracic legs in both sexes longer than the combined length of the remaining metathoracic tarsomeres. Basal tarsomere of the metathoracic legs in both sexes thickened. Morphological tergite VII in male short, trapezoid, truncate or very feebly excavate on apical margin (Fig. 125). Morphological sternite VII in male short and broadly but feebly excavate on apical margin (Fig. 126). Male aedeagus with tegmen slightly widened in apical part, pointed apically and setose laterally in preapical area (Figs 128-130); setation may be absent in certain specimens. Morphological tergite VII in female narrowly rounded and with long setation on apical margin (Fig. 131). Morphological sternite VII in female broadly rounded on apical margin (Fig. 132).

Sexual dimorphism: Metatibiae stronger thickened in the female rather than in male. Antennae comparatively shorter in the female.

Variability: The size and shape of the pale elytral markings vary. Specimens vary in body length from 2.60 to 3.30 mm.

Ecology & biology: Specimens collected in lowland and lower montane (1400-1800 m) rainforests during the daytime.

Differential diagnosis: *Sapintus sexualis* sp. nov. is close to *S. celeripes* sp. nov. (described above; Bird's Neck isthmus of New Guinea, Salawati Island of Raja Ampat Islands), *S. geminus* sp. nov. (described above; Papua New Guinea: Madang Province) and *S. horvathi* (Pic, 1902) (New Guinea & Central Moluccas). The tegmen of the aedeagus is not pointed apically in *S. geminus*, and is not widened preapically in *S. celeripes* and *S. horvathi*.

Distribution: This species is known from Batanta Island (Raja Ampat Islands) and the northern part of Bird's Head peninsula (Indonesian New Guinea).

Remarks: The holotype label has incorrect data on the longitude, with a degree digit of South longitude missing.

Sapintus* (s. str.) *vexator (Werner, 1965) (Figs 133-140, plate 58)

Paratypes 2♂ DCC: GILBERT IS. Buiartum I. Onotoa Atoll VIII-3-1951 [printed] / PacificSciBd. E.T.Moul, Collr. #200 at light [printed] / PARATYPE *Anthicus vexator* Werner [handwritten] / PARATYPE [printed, label blue] / F.G.Werner collection [printed].

Additional material: 2 specimens OUNH: Jul 1900.

Noumea. N. Caledonia. H.M.S.'Ring-arooma'. 1902. / E.M.M.pp.189-203. dd 1928 J.J.Walker / *Anthicus oceanicus* Laf.; 18 specimens DTC: Vietnam (Central), Nge [sic] Tinh prov., Cnalo N Vinh, 17.XII.1962, leg. O.L.Kabakov; 4 specimens DTC: Ср. Вьетнам пляж моря Куало 17.12.1963 Кабаков; 1 specimen NME, 1 specimen DTC: THAILAND, S, ca. 8 km E Khao Lak, 08° 36' 36" N 98° 14' 61" E, plantage Umg. Merlin resort, 30.VII.-14.VIII.2007, leg. A. Skale; 4 specimens NME, 1 specimen DTC: S-Thailand, ca. 8 km s. Khao Lak, 08° 36' 36" N 098° 14' 61" E plantage, Umg. Merlin resort leg. A. Skale, 30.7. - 11.8.2007.

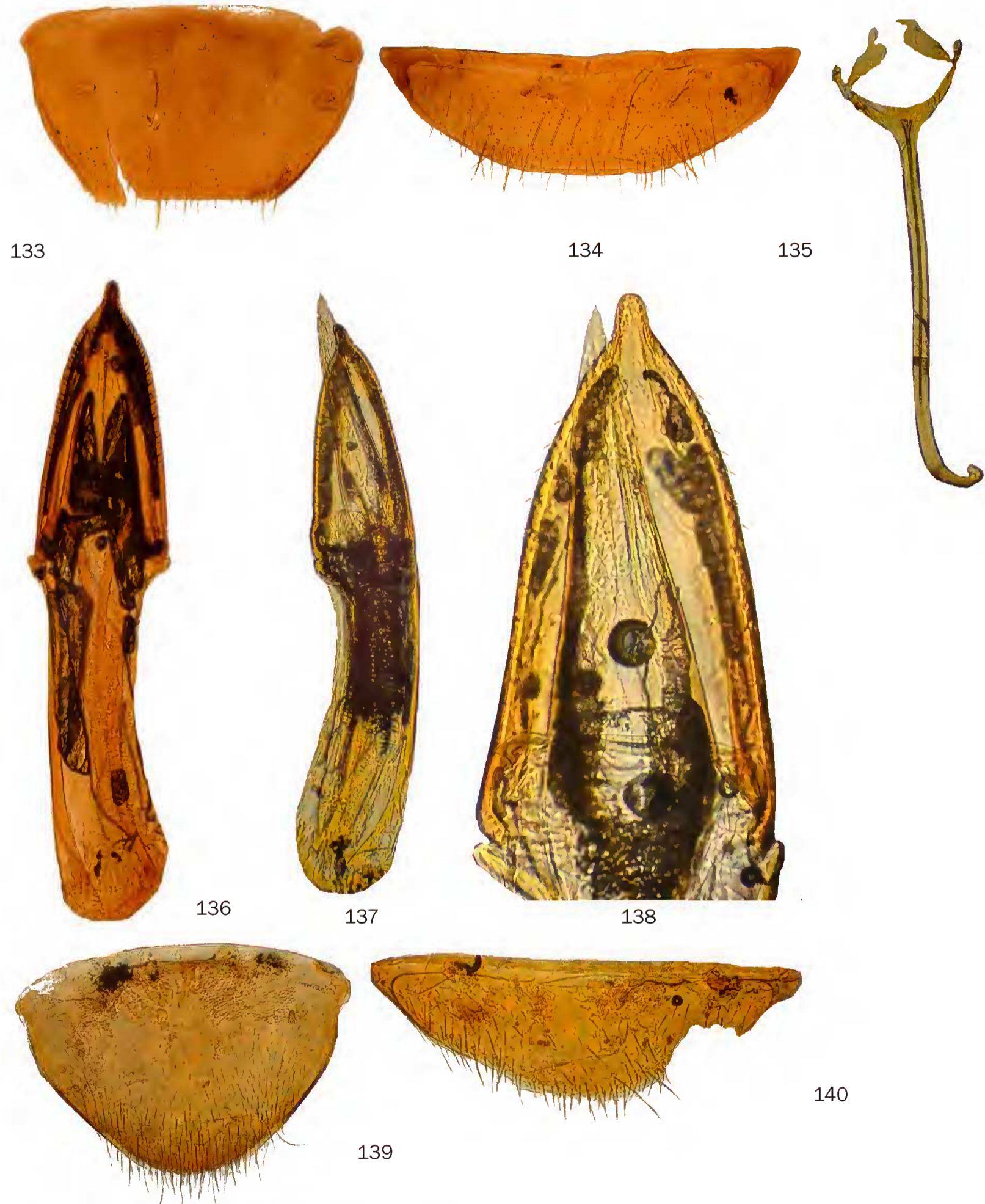
Measurements, paratype ♂: Total body length 3.45 mm, maximum combined width across the middle of elytra 1.20 mm. Head 0.70 mm long, across the eyes 0.70 mm broad, pronotum 0.65 mm long, maximum width 0.60 mm, elytra 2.10 mm long, 1.20 mm broad.

Description: Forebody orange to yellow. Elytra black to brown with orange or yellow markings, consisting of a broad postbasal transverse band not or narrowly interrupted on the suture and a broad, somewhat slightly oblique spot in the apical third of each elytron. Antennae, palpi and legs yellow or pale orange. Underside uniformly yellow or pale orange, with pro- and mesocoxae being somewhat paler. Head densely punctured, with large prominent eyes. Tempora straight, with rounded temporal angles, much shorter than the eye length. Head base slightly concave. Punctures very dense but flat, intervening spaces smaller than punctures, microreticulate. Pubescence yellowish, fine, sparse. Antennae short, barely reaching the elytral humeri in the male. Second antennomere half shorter than the next one. Antennomeres 3-7 elongate, slightly thickened distally. Antennomeres 9-10 shorter and thickened. Terminal antennomere short, conical, pointed, as long as or slightly longer than the penultimate one. Terminal maxillary palpomere broad, somewhat axeform. Pronotum very densely punctured dorsally, flattened, broadly rounded anteriorly, narrower than the head. Constricted laterally postmedium toward base. Punctures very dense but flat, intervening spaces much smaller than punctures. Pubescence yellowish, fine, sparse and appressed, with several long erect tactile setae on the sides and on the disc. Scutellum broadly triangular. Elytra elongate, smooth dorsally. Punctures large, coarse and dense, getting smaller but not much sparser in the apical third. Intervening spaces irregular, mostly smaller than or as large as the punctures. Pubescence yellowish, fine, long and dense, suberect. Undersetae directed obliquely lat-

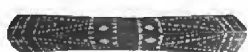


erally. Sutural striae visible from the apices toward the basal third. Hind wings fully developed. Frontal margins of mesepisterna with a couple of long setae directed upwards; these setae are exposed from under the humeri in the dorsal view. Legs long and slender. Male basal tarsomere of the

metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male truncate on the apical margin (Fig. 133). Morphological sternite VII in male short and broad, broadly rounded on the apical margin (Fig. 134). Male aedeagus broad



Figures 133-140. *Sapintus vexator* (Werner, 1965). 133-138: ♂♂ from Kualo env., Central Vietnam. 133 - Tergite VII; 134 - Sternite VII; 135 - Spiculum gastrale; 136 & 137 - Aedeagus; 138 - Tegmen of aedeagus. 139-140: ♀ from Kualo env., Central Vietnam. 139 - Tergite VII; 140 - Sternite VII.



with apex shortly narrowed, pointed with or without short lateral preapical setae (Figs 136-138). Morphological tergite VII in female narrowly rounded on apical margin (Fig. 139). Morphological sternite VII in female broadly rounded on apical margin (Fig. 140).

Sexual dimorphism: Females have a slightly more slender profemora than males.

Variability: This species varies in body colouration from pale brown to black, and the pale markings of the elytra vary from reddish to pale yellow. Specimens also significantly vary in body length from 2.93 mm to 3.80 mm (Werner 1965). The most important variable character is the density of the punctures on the forebody, especially the pronotum. In specimens from Micronesia punctures are often very fine and dense (intervening spaces much smaller than punctures), but in specimens from continental Asia, pronotal punctures are much larger, with clearly visible microreticulate intervening spaces. The head base is much more distinctly notched medially in certain specimens. The shape of the pronotum is more elongate in certain specimens. An anterior pair of pale elytral spots often takes almost the whole anterior half of the elytra (like in paratypic specimens from Gilbert Islands); anterior spots tending to anastomose across the suture in generally paler coloured specimens, but are distinctly separated on the suture in darker individuals. Lateral setae on the aedeagus can be absent or present (may depend on the age of specimens).

Ecology & biology: Recorded from *Portulaca lutea* Soland. ex G.Forst. (Werner 1965). Collected both at daytime and at light. The species inhabits both natural and antropogenous habitats. It is not recorded from inland or montane areas, distributed mostly along the coast.

Distribution: This species is widely distributed on the Pacific Islands, hitherto recorded from the Caroline Islands, Marshall Islands, Gilbert Islands, Hawaii, and New Caledonia. It is also recorded from Sri Lanka, Vietnam & Thailand. Currently there are no known records from the Indo-Australian transition zone, but it seems obvious that this species occurs in the study region.

Commented species list of *Sapintus* s. str. from the Indo-Australian transition zone

Only original descriptions and references with data from the study area are listed. For distribution of species please refer to maps 2-6.

Anthicinae Latreille, 1819

Anthicini Latreille, 1819

Sapintus Casey, 1895: 732

Type species: *Anthicus pubescens* LaFerté-Sénectère, 1849, by Werner, 1962

Subgenus ***Sapintus*** s. str. Casey, 1895: 732

Type species: *Anthicus pubescens* LaFerté-Sénectère, 1849, by Werner, 1962

Sapintus adonis (Pic, 1900)

References: Pic (1900: 605), as *Anthicus Adonis*; Pic (1911: 31), as *Anthicus Adonis*.

Distribution: Trans-Fly lowlands (southern Papua New Guinea).

Sapintus airi sp. nov.

Distribution: Makira (= San Cristobal, San Cristoval) and Guadalcanal islands (Solomon Islands).

Sapintus albertisi (Pic, 1900)

References: Pic (1900: 605), as *Anthicus Albertisi*; Pic (1911: 31), as *Anthicus Albertisi*; Uhmman (2000: 151), new combination.

Distribution: Trans-Fly lowlands and Papuan Peninsula (Papua New Guinea).

Sapintus alfurus (Pic, 1900)

Pic (1900: 608), as *Anthicus*; Pic (1911: 31), as *Anthicus*.

Distribution: Papuan Peninsula (E Papua New Guinea).

Sapintus celeripes sp. nov.

Distribution: Southern Bird's Neck isthmus of New Guinea, Salawati Island (Raja Ampat Islands).

Sapintus curvitiba sp. nov.

Distribution: Makira Island (= San Cristobal, San Cristoval) (Solomon Islands).

Sapintus dilensis (Pic, 1900)

= *Anthicus dilensis* var. *Csikii* Pic, 1902

= *Sapintus relatus* Bonadona, 1981 [consider new synonymy above]

References: Pic (1900: 607), as *Anthicus*; (Pic 1902: 409) as *Anthicus Ciskii* (var. de *dilensis* ?); Pic (1911: 44), as *Anthicus dilensis* and ? var. *Csikii*; Uhmman (1990: 142), new combination; Uhmman (1995a: 525); Uhmman (2000: 151); Telnov (2006a: 62), new synonymy.

References *S. relatus*: Bonadona (1981: 196).

Distribution: North Moluccas (Halmahera Island), Raja Ampat Islands (Batanta Island, Waigeo



Island), Indonesian Papua (Bird's Head Peninsula, Bird's Neck isthmus, northern coast), Papua New Guinea (Papuan Peninsula, Madang & Morobe Provinces) and Bismarck Archipelago (Lavongai Island, New Britain Island).

Sapintus dyaulensis nom. nov.

References: Bonadona (1981: 201), as *Sapintus propinquus*.

Distribution: Dyaul (= Djaul) Island (Bismarck Archipelago), Indonesian Papua (Bird's Neck isthmus). Record from Thailand (Telnov 1999) is based on misidentified specimen.

Sapintus geminus sp. nov.

Distribution: Adelbert Range (Madang Province, E Papua New Guinea).

Sapintus gemitus sp. nov.

Distribution: Central Sulawesi.

Sapintus gracilicornis (Pic, 1895)

= *Anthicus neoguineensis* Pic, 1900 [consider new synonymy above]

= *Anthicus gracilicornis* v. *semiobliteratus* Pic, 1900 [consider new synonymy above]

= *Sapintus repentinus* Bonadona, 1981 [consider new synonymy above]

References *S. gracilicornis*: Pic (1895: 94), as *Anthicus*; Pic (1911: 51), as *Anthicus*, erroneously mentioned 'Sumbawa' in distribution; Uhmman (1990: 142), new combination; Uhmman (1995a: 525).

References *A. neoguineensis*: Pic (1900: 607), as *Anthicus*; Pic (1911: 63), as *Anthicus*.

References var. *semiobliteratus*: Pic (1900: 607 footnote 1), as *Anthicus gracilicornis* v. *semiobliteratus*; Pic (1911: 51), as var. *semiobliteratus*.

References *S. repentinus*: Bonadona (1981: 199).

Distribution: East Malaysia (Sabah), Indonesia (Kalimantan, Sulawesi), the Philippines (Balabac, Luzon, Tawi-Tawi), New Guinea (both Indonesian & Papua New Guinea). Also reported from islands of Sumbawa (Lesser Sunda Islands, Indonesia) and Banguay (East Malaysia), but without specimens corresponding to these localities.

Sapintus hirtipennis (Pic, 1900)

References: Pic (1900: 604), as *Anthicus*; Pic (1911: 52), as *Anthicus*.

Distribution: Papuan Peninsula (E Papua New Guinea).

Sapintus horvathi (Pic, 1902)

References: Pic (1902: 407), as *Pseudoleptaleus Horváthi*; Pic (1911: 29), as *Leptaleus (Pseudoleptaleus) Horvathi*; Uhmman (1995a: 525), as *Pseudoleptaleus*; Uhmman (2000: 149), as *Pseudoleptaleus*; Telnov (2007: 71), new combination.

Distribution: Morobe Province & Yule Island (near southern coast of Papuan Peninsula, Papua New Guinea), Cenderawasih Bay (Biak & Yapen islands), Central Moluccas (Seram Island), Queensland (North Australia). North Australian record has not been anatomically confirmed.

Sapintus insulanus (Pic, 1900)

References: Pic (1900: 607), as *Anthicus*; Pic (1911: 56), as *Anthicus*; Uhmman (1990: 142), as *Hirticomus*; Uhmman (2000: 150), as *Hirticomus*; Uhmman (2007: 44), as *Hirticolles*.

Distribution: Yule Island (near the southern coast of Papuan Peninsula, Papua New Guinea), Morobe Province (Papua New Guinea). Records by Uhmman (2000, 2007) from Queensland (northern Australia) and Bird's Head Peninsula of New Guinea need further confirmation.

Sapintus insularis (Werner, 1965)

= *Sapintus placitus* Bonadona, 1981 [consider new synonymy above]

References: Werner (1965: 266), as *Anthicus*; Werner (1967: 311-312), as *Anthicus*; Bonadona (1981: 195), as *Sapintus placitus*.

Distribution: Caroline Islands, Marshall Islands, Hawaii, Dyaul (= Djaul) Island (Bismarck Archipelago).

Sapintus javanus (Marseul, 1882a)

= *Anthicus javanus* Marseul, 1882b [duplicative description]

= *Anthicus luteonotatus* Pic, 1913

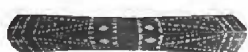
= *Sapintus sodalis* (Pic, 1895) [consider new synonymy above]

References: Marseul (1882a: 62), as *Anthicus*; Marseul (1882b: 121), as *Anthicus*; Pic (1911: 56), as *Anthicus*.

Distribution: Greater Sunda Islands (Java, Sulawesi, Sumatra, whole of Borneo), southern and eastern China (inclusive Hong Kong), India (whole territory except arid areas on the West), Japan, West Malaysia, Sri Lanka, Taiwan, Thailand, Vietnam, New Guinea (both Indonesian and Papua New Guinea).

Sapintus loriae (Pic, 1900)

References: Pic (1900: 606), as *Anthicus Loriae*;



Pic (1911: 59), as *Anthicus Loriae*.

Distribution: Papuan Peninsula (E Papua New Guinea).

Sapintus macrops sp. nov.

Distribution: Nabire area (northern Bird's Neck isthmus, Indonesian New Guinea).

Sapintus madangensis Uhmann, 1995

References: Uhmann (1995a: 523); Uhmann (2000: 152).

Distribution: Papuan Peninsula and Madang Province (E Papua New Guinea).

Sapintus malayensis (Pic, 1895)

References: Pic (1895: 94), as *Anthicus*; Pic (1911: 60), as *Anthicus*.

Distribution: Sumbawa (Lesser Sunda Islands), Central Sulawesi. All other records based or certainly based on misidentifications.

Sapintus malut sp. nov.

Distribution: North Moluccas (islands of Bacan, Halmahera, Hiri, and Ternate).

Sapintus oceanicus (LaFerté-Sénéctère, 1849a)

= *Anthicus oceanicus* LaFerté-Sénéctère, 1849b [homonym]

= *Anthicus oceanicus* var. *Françoisi* Pic, 1902 [consider new synonymy above]

= var. *guamensis* Blair, 1942

References: LaFerté-Sénéctère (1849a: 70), as *Anthicus Oceanicus*; LaFerté-Sénéctère (1849b: 170), as *Anthicus Oceanicus*, homonymy; Blair (1942: 57), as variety *guamensis*; Werner (1965: 261), as *Anthicus*, new synonymy.

Distribution: This species is mainly distributed on Indian and Pacific islands, as also along coastal areas of African, Asian and Australian mainland. Hitherto recorded from Australia (northern coast and Cocos Keeling islands), Comoros Islands, Cook Islands (Rarotonga), Fiji, French Polynesia, Guam, Hong Kong, India (western coast), Indonesia (Borneo, Krakatau, Mentawai Islands, Sulawesi, Sumatra), Japan (Ryukyu Islands), Kenya, Leuantua atoll (Ontong Java plateau N of Solomon Islands), Madagascar, Marquesas Islands, Mascarene Islands (both Mauritius & Reunion), New Caledonia, the Philippines (Luzon, Palawan), Samoa, Seychelles Islands, Society Islands, Somalia, South African Republic, Sri Lanka, Tanzania, Thailand, Vanuatu, Vietnam, numerous Micronesian islands.

Note: Not yet confirmed but should be present also on New Guinea and Solomon Islands.

Sapintus papuus (Pic, 1900)

References: Pic (1900: 603), as *Anthicus*; Pic (1911: 66), as *Anthicus*; Uhmann (1990: 143), new combination.

Distribution: Papuan Peninsula and Morobe Province (E Papua New Guinea).

Sapintus plectilis (Pic, 1910)

References: Pic (1910: 71), as *Anthicus*; Pic (1911: 67), as *Anthicus*; Uhmann (1983: 204), new combination; Uhmann (1994: 674), mentioned 'Sulawesi' without specimen locality data.

Distribution: Southern and eastern China, India (whole territory except arid areas on the West), Indonesia (Sulawesi), Taiwan, Thailand, Vietnam. Records from Sulawesi possible based on mislabelled specimens.

Sapintus quadrinotatus (Pic, 1900)

References: Pic (1900: 604), as *Anthicus*; Pic (1911: 69), as *Anthicus*; Uhmann (2000: 151), as *Anthicus*.

Distribution: Papuan Peninsula and Madang Province (E Papua New Guinea).

Note: Uhmann (2000) recorded this species from Mount Victoria in New South Wales, Australia. Later, in his review of Australian Anthicidae Uhmann (2007) did not mention this species again. Record from New South Wales seems very dubious for this species and needs further confirmation.

Sapintus rugosicollis (Pic, 1900)

References: Pic (1900: 606), as *Anthicus*; Pic (1911: 71), as *Anthicus*; Uhmann (1990: 143), new combination.

Distribution: Trans-Fly lowlands and Madang Province (Papua New Guinea). Record from Cook Islands (Telnov 1999) is based on misidentified specimens of *S. oceanicus* (LaF.).

Sapintus semirugosus (Pic, 1902)

References: Pic (1902: 410), as *Anthicus*.

Distribution: Madang Province (E Papua New Guinea).

Sapintus sexualis sp. nov.

Distribution: Batanta Island (Raja Ampat Islands), Manokwari area (Bird's Head Peninsula, Indonesian New Guinea).

Sapintus vexator (Werner, 1965)

References: Werner (1965: 264), as *Anthicus*.

Distribution: Caroline Islands, Gilbert Islands, Hawaii, Marshall Islands, New Caledonia, New Heb-

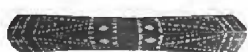


rides, Peninsular Malaysia, the Philippines (Luzon, Panay), Singapore, Sri Lanka, Thailand, Vietnam. Note: Not yet confirmed but should be present also on New Guinea and Solomon Islands.

Identification key to *Sapintus* s. str. species from the Indo-Australian transition zone

This original key to adult *Sapintus* from the study area is primarily based on external morphology characters. When necessary, differences in structure of genital organs also being discussed.

- 1 Elytral pubescence simple, long and erect, without short undersetae. Forebody red to orange, elytra black with orange apical third *S. adonis*
- Elytral pubescence double, with dense undersetae arranged obliquely laterally in most species. Dorsal colouration different 2
- 2 Dorsal body more or less uniformly dark, black or brown, or forebody darker than brown elytra. Appendages dark or pale 3
- Dorsal body generally dark or pale, or distinctly bi- or multi-coloured. Appendages dark or pale 5
- 3 Head dorsum roughly punctured, with evident smooth intervening spaces. Head with impunctate median longitudinal line *S. alfurus*
- Head dorsum very densely punctured, at least on frons, intervening smooth spaces not evident. Head without impunctate median line 4
- 4 Tempora much shorter than eye, clearly shorter than one third of eye length. Pronotum distinctly widened in anterior half. Elytral punctures small and fine *S. insularis*
- Tempora about one third of eye length. Pronotum rounded, barely widened anteriorly. Elytral punctures large and deep *S. albertisi*
- 5 Elytra pale with more than three brown or black irregular transverse bands of various widths, which can be complete or interrupted along suture 6
- Elytra if pale then with less than three transverse brown or black bands 7
- 6 Male aedeagus tripartite apically *S. madangensis*
- Male aedeagus monopartite apically, bluntly pointed *S. quadrinotatus*
- 7 Forebody distinctly paler than uniformly dark elytra 8
- Forebody not or not distinctly paler than general colouration of elytra. Elytra not uniformly dark coloured, pale with dark markings or vice versa 10
- 8 Tempora about one third of eye length. Pubescence sparse and short on dorsal forebody *S. rugosicollis*
- Tempora shorter than one third of eye length. Pubescence on forebody longer and denser 9
- 9 Punctuation of head consisting of comparatively large punctures with intervening spaces (partly microstriate or micropunctate) being larger than main punctures *S. loriae*
- Punctuation of head consisting of small and dense punctures, intervening spaces smaller than punctures
..... *S. macrops*
- 10 Dorsal body uniformly yellow or pale brown, or with darker transverse median or postmedian spot or band on elytra 11
- Dorsal body colouration different 12
- 11 Elytra usually without dark markings. Pronotal punctuation generally denser with comparatively smaller intervening spaces. Male antennomeres 7-10 derivative (strongly modified: 7th-9th widened and elongated, 10th widened and shortened) *S. plectilis*
- Elytra with large irregular median brown spot. Pronotal punctuation generally less dense. Male unknown
..... *S. insulanus* (is known only from the female holotype, therefore its correct identification may be difficult)
- 12 Body small (2.27 mm). Head base distinctly truncate. Male antennomeres 7-10 derivative (strongly modified: 7th-9th widened and elongated, 10th widened and shortened). Elytra with base narrowly dark and two narrow, curved transverse dark bands. Pronotum ovoid *S. monstrosiantennatus*
- Without this combination of characters 13
- 13 Body small (2.2-2.4 mm). Eyes small, tempora about as long as eye length. Head base subtruncate. Pronotum distinctly narrowed posteriad. Dorsal punctuation coarse, at least on pronotum intervening spaces smaller than punctures. Two pale spots on each elytron, postmedian spot smaller than anterior *S. javanus*
- Without this combination of characters 14



14 Pronotal punctuation dense and coarse, irregular, intervening spaces therefore also very irregular in size. Head smooth, sparsely punctured. Elytra with dark shoulders, broad dark median transverse band (posterior margin is somewhat rounded in this band) and dark apices. Male aedeagus with narrow and prolongate tegmen apex (Figs 84-85) *S. malayensis*
 - Without this combination of characters. Pronotal punctuation less coarse and with more regular intervening spaces. Male aedeagus different 15

15 Forebody reddish or yellow, elytra yellow with dark humeri, apices and median transverse band (more or less strongly interrupted on suture). Pronotal disc densely punctured, intervening spaces smaller than punctures 16
 - Dorsal body colouration if pale then reddish not yellow or intervening spaces between punctures on pronotal disc at least as large as punctures 17

16 Tempora about as long as eye length. Head base very broadly rounded, subtruncate *S. airi*
 - Tempora distinctly shorter than eye length. Head base broadly rounded *S. hirtipennis*

17 Dorsal punctuation very dense, at least on head and pronotal discs, intervening spaces not evident or smaller than punctures. Dorsal forebody distinctly opaque (species with very dense punctured forebody but smooth intervening spaces considered in both couplets) 18
 - Dorsal punctures even when large and dense always with smooth intervening spaces not smaller than punctures. Dorsal forebody more or less smooth 26

18 Metatibiae derivative – distinctly thickened in both sexes. Head base narrower rounded, prolonged posterior to eyes (Plate 57, figs 5, 7). Forebody smooth on intervening spaces, not or slightly opaque. Male aedeagus with tegmen preapically widened (Figs 128-130) *S. sexualis*
 - Metatibiae simple, if derivative (thickened) than only in females (when also in males, than insignificantly thickened). Head base broadly rounded or truncate, not prolonged. Forebody opaque on intervening spaces (can be partly smooth in *S. celeripes*, *S. densepunctatus* and *S. vexator*). Male aedeagus different 19

19 Male aedeagus with tegmen strongly constricted and elongate in apical part (Figs 110-111). Forebody dorsal punctuation large and crateriform (also smaller punctures present on head) *S. papuus*
 - Male aedeagus different. Forebody dorsal punctuation often minute, if larger than punctures not crateriform .. 20

20 Intervening spaces on head dorsum at least partly microreticulate. Head base truncate or almost truncate, with more or less distinct median notch. Variable species with forebody very dense to relatively sparse punctate. Elytra black each with two yellow spots very variably in size. Legs yellow *S. vexator*
 - Intervening spaces not evident but when evident - not microreticulate. Head base not notched medially 21

21 Head base distinctly rounded 22
 - Head base truncate or subtruncate 23

22 Metatibiae derivative in females, distinctly thickened. Forebody red or dark orange. Male aedeagus with tegmen pubescent preapically *S. celeripes*
 - Metatibiae derivative in both sexes but thickened insignificantly. Forebody black, base of pronotum pale in certain specimens. Male aedeagus with tegmen glabrous *S. malut*

23 Punctures on dorsal forebody of two sizes, with sparser large punctures between very dense micropunctures ...
 *S. dilensis*
 - Punctures on dorsal forebody more or less uniform in size..... 24

24 Forebody smooth on intervening spaces *S. densepunctatus*
 - Forebody opaque, intervening spaces almost not evident 25

25 Posterior elytral pale spot oval or circular, not or indistinctly prolongate anteriorly along suture. Male aedeagus tegmen microsetose laterally. Forebody usually black or brown. Very variable species *S. oceanicus*
 - Posterior elytral pale spot more cylindrical, aligned obliquely (prolonged anteriorly along suture). Male aedeagus tegmen glabrous. Forebody reddish *S. semirugosus*

26 Head base distinctly rounded 27
 - Head base truncate or sbtruncate 31

27 Punctuation of dorsal forebody very dense, intervening spaces at least partly much smaller than punctures . 28

28 Metatibiae distinctly derivative – thickened in both sexes or in females only. Femora uniformly coloured 29
 - Metatibiae distinctly derivative – thickened in both sexes or in females only. Femora bicoloured - pale in basal, darker in distal half 30

29 Metatibiae distinctly thickened in both sexes. Head base narrower rounded, prolonged posterior to eyes (Plate 57, figs 5, 7). Forebody smooth on intervening spaces, not or slightly opaque. Male aedeagus with tegmen glabrous (Figs 128-130) *S. sexualis*



- Metatibiae distinctly thickened only in females, distinctly thickened. Head base comparatively broader rounded. Male aedeagus with tegmen pubescent preapically (Figs 12-13) *S. celeripes*
- 30 Male aedeagus tegmen broadly rounded apically *S. geminus*
- Male aedeagus tegmen bluntly pointed apically *S. horvathi*
- 31 Intervening spaces on head dorsum at least partly microreticulate. Head base truncate or almost truncate, with more or less distinct median notch. Variable species with forebody very dense to relatively sparsely punctate. Elytra black each with two yellow spots very variably in size. Legs yellow..... *S. vexator*
- Intervening spaces not microreticulate. Head base not notched medially 32
- 32 Punctures on dorsal forebody of two sizes, with sparser large punctures between very dense micropunctures ...
..... *S. dilensis*
- Punctures more or less uniformly on dorsal forebody 33
- 33 Forebody red or orange. Male aedeagus tegmen narrow, pubescent laterally *S. gemitus*
- Without this combination of characters 34
- 34 Pronotum strongly campanulate - widened in anterior half and strongly constricted posteriorly. Pronotal disc with a shallow track of longitudinal impression. Male metatibiae derivative - slightly curved. Antennae very long
..... *S. curvitibia*
- Pronotum either cylindrical or slightly campanulate, without evidence of longitudinal impression on the disc. Metatibiae not modified 35
- 35 Tegmen shorter than phallobase. Tegmen strongly narrowed apically with strongly prolonged apex (Figs 35-36)
..... *S. dyaulensis*
- Tegmen about as long as phallobase. Tegmen narrowed apically but with less strongly prolonged apex 36
- 36 Generally larger species, body length 3.25-5.30 mm. Posterior pale spot of elytra more transverse with anterior margin curved, not straight (this characters is of course variable). Male aedeagus generally more slender, tegmen pubescent laterally (Figs 61-65) *S. gracilicornis*
- Generally smaller species, body length about 3.25 mm. Posterior pale spot of elytra ovoid, its anterior margin evenly rounded. Male aedeagus generally stouter, tegmen glabrous (Figs 26-27) *S. densepunctatus*

Geographic distribution and endemism in *Sapintus* s. str. from the Indo-Australian transition zone

The highest species diversity (72%, or 22 species of a total of 31) is registered from New Guinea, with another 6 species (19%) being recorded from Sulawesi (Tab. 2). Smaller islands (the Moluccas, the Bismarck Archipelago or Raja Ampat) are represented by lower *Sapintus* species diversity. Unfortunately, the material available for this study is not enough to be able to make final conclusions and only sketches the possible general pattern for this genus in the study region.

Most of the main islands, or insular systems in general, demonstrate high rates of geographical endemism (66% for the Solomon Islands, 59% for New Guinea, 33% for Sulawesi and the North Moluccas). On the other hand, no endemic species have hitherto been recorded from the Bismarck Archipelago, Raja Ampat or the Lesser Sunda Islands, principally due to the lack of material.

New Guinea is widely known for the high level of geographical isolation between different parts of this large island, and also between its geographical features, like peninsulas or montane ridges. An attempt to assess the diversity and endemism of

Sapintus in various parts of New Guinea is presented in Tab. 3.

The Central Cordillera, (and also the Ramu River valley with the Adelbert & Finisterre mountains) is characterised by the highest species diversity of *Sapintus* on the island. Registered endemism is high in the same areas, plus the southern lowlands (67%, 80% and 75% respectively). Again, the studied material was not enough to be able to make final decisions and my assessment only represent the current state of our knowledge.

Only reliable information was used for this assessment; dubious records were not considered.



Table 2. Diversity and rate of endemism in *Sapintus* species from the Indo-Australian transition zone.

Island Group	Island / part of an island	<i>Sapintus</i> species registered	Rate of endemism
Bismarck Archipelago	Dyaul (= Djaul)	2	0%
	Lavongai	1	0%
	New Britain	1	0%
Lesser Sunda Islands	Sumbawa	1	0%
	North Moluccas (region)	3	33%
	Halmahera	3	0%
	Hiri	1	0%
	Ternate	1	0%
Central Moluccas	Seram	2	0%
New Guinea, island (satellite islands excluded)		22	59%
	Indonesian Papua (Cenderawasih Bay excluded)	8	12%
	Papua New Guinea	15	67%
Cenderawasih Bay Islands	Biak	1	0%
	Yapen	1	0%
Sulawesi, island		6	33%
Sulawesi (North)		2	0%
Sulawesi (Central)		4	50%
Sulawesi (South)		1	0%
Raja Ampat Islands (region)		4	0%
	Batanta	2	0%
	Salawati	2	0%
	Waigeo	2	0%
Solomon Islands (region)		3	66%
	Guadalcanal	1	0%
	Makira (= San Cristobal)	2	50%
	Santa Isabel	1	0%

Table 3. Diversity and endemism of *Sapintus* in the various geographical systems of New Guinea.

Territory	<i>Sapintus</i> species registered	Rate of endemism
Bird's Head Peninsula (in total)	3	0%
Arfak & Tamarau Mts.	3	0%
Cenderawasih Bay islands	2	0%
Bird's Neck isthmus	3	33%
Central Cordillera (Papuan Peninsula & Owen Stanley Mts.)	5	60%
North New Guinea: Cyclops Mts.	1	0%
East New Guinea: Finisterre & Adelbert Mts., Ramu River valley (Madang surroundings sensu lato)	5	80%
Southern New Guinea (Trans-Fly, Merauke, Asmat)	4	75%



Species richness and endemism of *Sapintus* s. str. at different altitudes

The first assessments of the role of altitudinal vegetation zones and their possible affect on Anthicidae species diversity were made by Telnov (2011a & b) for Tomoderinae and Macratriinae, respectively. Also, members of *Sapintus* demonstrate some preferences for specific types of vegetation = verti-

cal component (Tab. 4). Data currently available on *Sapintus* are not sufficient to be able to make final decisions. The greatest number of *Sapintus* species is found in the lowland zone (13 species of a total of 31), which is distinctly greater than the species diversity in the lower montane (1 species, *S. monstrosi-antennatus* sp. nov.) zone. No species were recorded from the upper montane zone. One species (*S. sexualis* sp. nov.) is not fitting in any of the zones.

Table 4. Number of the Papuan *Sapintus* species recorded for altitudinal zones.

Lowland zone (0-700 m / 200 m zone overlap allowed)	13 species
Lower montane zone (701-1800 m / 200 m zone overlap allowed)	1 species
Species shared in-between lowland & lower montane zones	1 species
Species shared in-between lowland & lower montane zones	1 species
Upper montane zone (2901-3900 m / 200 m zone overlap allowed)	0 species
Species not fitting in any of the zones (altitudinal interval > than 900 m)	1 species
Elevation data deficient	16 species

Annex 1: New descriptions, redescriptions and new records of *Sapintus* s. str. from the Oriental and Australian region

Sapintus (s. str.) *andreaskopetzi* sp. nov. (Figs 141-142, plate 59 figs 1-2)

Holotype ♀ NME: **NEPAL P: Seti/D: Bajhang** 12 km NE Chainpur, Talkot Gad S of Talkot, N29°36'17", E81°17'54", 1400m, 28.VI.2009 leg. A.Kopetz riverside #37.

Derivatio nominis: Patronymic. Named after Andreas Kopetz (Erfurt, Germany) - well-known German coleopterist and the first collector of this species.

Measurements, holotype ♀: Total body length 4.98 mm, maximum combined width across the middle of elytra 1.52 mm. Head 1.03 mm long, across the eyes 0.90 mm broad, pronotum 0.95 mm long, maximum width 0.68 mm, elytra 3.0 mm long, 1.52 mm broad.

Description: Dorsal surface black, elytra with two dark orange transverse bands. The anterior one covering almost the whole basal third of the elytra (leaving only a narrow black basal area) is bearing the lateral margins of the elytra and is not interrupted on the suture; the posterior one is almost half as broad as the anterior, situated in the apical third, very narrowly interrupted on the suture and almost bearing the lateral margins of the elytra. Antennae brown with basal antennomere black and terminal - pale brown. Palpi are brown. Femora bicoloured,

yellow basally, black distally. Tibiae black, yellowish distally. Tarsi yellowish brown. Underside of head and prothorax black, meso-, metathorax and abdominal ventrites reddish black. Head smooth and shiny, with midsized and moderately prominent eyes. Tempora indistinctly shorter than the eye length, slightly converging toward base, with rounded temporal angles. Head base very broadly rounded and shallowly notched medially. Punctures small, fine and sparse, intervening spaces much broader than punctures. Areas posterior to each eye somewhat more densely punctured than the rest of the head dorsum. Pubescence whitish, fine and sparse. Antennae slender, reaching over the base of the elytra in the female. Second antennomere in female short, about 1/2 the size of the third antennomere. Antennomeres 3-5 elongate and slender, of which the 3rd antennomere is distinctly the longest. Antennomeres 6-9 shorter than previous ones, slightly thickened distally. Penultimate antennomere cylindrical, slightly shorter than the previous one. Terminal antennomere in female elongate, blunt, 1/3 longer than penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum smooth and shiny dorsally, rounded anteriorly, significantly narrower than the head, with a feeble lateral postmedian transverse impression. Punctures vary in size but are generally large, deep and quite dense. Intervening spaces vary in size, ranging from much larger than to nearly as large as the punctures. Pubescence whitish, fine, and sparse. Anterior margin with a line of short dense



setae. Scutellum truncate apically. Elytra strongly elongate, smooth and shiny. Punctures large, deep and dense, irregularly arranged. Punctures getting much more flat in the apical third. Intervening spaces irregular in size, smaller than the punctures in the basal half but slightly larger than the punctures in the apical third. Pubescence yellowish, long and dense, suberect. Undersetae directed obliquely laterally. Sutural striae complete and broad. Hind wings fully developed. Legs very long and slender. Female meso- and metatarsi as long as their tibiae respectively. Female basal tarsomere of the metathoracic legs as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in female narrowly rounded on apical margin (Fig. 141). Morphological sternite VII in female broadly rounded on apical margin (Fig. 142). Sexual dimorphism: Male is unknown.

Ecology & biology: The holotype was sampled on riverside at an altitude of 1400 m.

Differential diagnosis: This species is similar to several East Palearctic, Oriental and Papuan species of *Sapintus* - large in size and with pale bands or spots on the elytra, namely *S. binhensis* (Pic, 1922) (Vietnam), *S. cochaeres* (Lewis, 1895) (Japan, Far East of Russia), *S. cruciellus* (Marseul, 1882a) (Indonesia: Java), *S. dyaulensis* Telnov (consider name change above; Bismarck Archipelago & New Guinea), *S. gracilicornis* (Pic, 1895) (widespread in Oriental and Papuan region), *S. hirtisetosus* (Marseul, 1884) (Indonesia: Sumatra, the Philippines: Luzon, Palawan), *S. inspoliatus* Bonadonna, 1981 (The Philippines: Tawi-Tawi), *S. litorosus* (Lewis, 1895) (Japan), *S. longehirsutus* (Pic, 1922) (Vietnam), *S. longepilosus* (Pic, 1942) (China, without precise location), *S. marseuli* (Pic, 1892) (Japan, Eastern and Southern China, Nepal, Taiwan, Thailand, Vietnam), *S. nomurai* Nardi, 2004 (Japan: Ryukyu Islands), *S. subrubrocinctus* (Marseul, 1882a) (Indonesia: Sumatra; records from Peninsular Malaysia and Borneo published by Uhmman need confirmation), and *S. triparticornis*

(Pic, 1926) (Vietnam). Some of them (*S. hirtisetosus*, *S. longehirsutus*, *S. marseuli*, *S. subrubrocinctus*, *S. triparticornis*) have a red or dark red pronotum or whole forebody. *S. litorosus* is generally pale on the elytra, with dark areas restricted to a median transverse band (interrupted on the suture) and also the black base and apices. The male of this species has modified intermediary antennomeres 4-6 (the male is unknown in *S. andreaskopetzi*). Elytral pubescence in *S. andreaskopetzi* is not as extraordinarily long as in *S. binhensis*, *S. longehirsutus* or *S. longepilosus*. The head base is distinctly truncate in *S. marseuli* and *S. triparticornis*, but broadly rounded in *S. andreaskopetzi*. Punctures of the head are fine and sparse in *S. andreaskopetzi*, not like in any of the afore-listed species (head more coarse/densely punctured in all of them except *S. binhensis* and *S. marseuli*). *S. binhensis* have strongly elongate male antennomeres 7-10; female antennomeres are much less slender than in *S. andreaskopetzi*. This new species is also remarkably large, with holotype's body length almost 5.0 mm - a really rare case in *Sapintus*. *S. cruciellus* differs in having the head base truncate and a denser punctured forebody.

Distribution: Only known from Nepal.

***Sapintus* (s. str.) *angulapex* sp. nov.** (Figs 143-145, plate 59 figs 3-4)

Holotype ♀ NHMB: PHILIPPINES, 150 m Palawan, PORT BARTON 14.-18.Dec. 1990 Bolm lgt.

Derivatio nominis: Named from the Latin 'angulus' [angle] + 'apex' [apex, top], because of the dent-like prolonged apices of the elytra.

Measurements, holotype ♀: Total body length 3.42 mm, maximum combined width across the middle of elytra 0.95 mm. Head 0.71 mm long, across the eyes 0.70 mm broad, pronotum 0.70 mm long, maximum width 0.56 mm, elytra 2.01 mm long, 0.95 mm broad.

Description: Dorsum reddish orange, elytra paler



141



142

Figures 141-142. *Sapintus andreaskopetzi* sp. nov., holotype ♀. 141 - Tergite VII; 142 - Sternite VII.



with black markings in the form of a broad median transverse band (narrowly interrupted on the suture) and a black preapical spot (leaving extreme apices of the elytra yellow). Legs, palpi and antennae yellow. Underside uniformly reddish orange, trochanters yellow. Head smooth dorsally, with midsized, not very strongly prominent eyes. Tempora almost straight, slightly shorter than the eye length, with rounded temporal angles. Head base very broadly rounded, subtruncate. Punctures are of two sizes. Large punctures are quite deep, irregularly dispersed with intervening spaces ranging from smaller than to larger than these punctures. Small and fine punctures are unevenly dispersed between the large punctures. Pubescence yellowish, short and very fine, dense. Antennae long and slender, reaching postbasal impression of elytra in the female. Second antennomere in female short, half the size of the third antennomere. Antennomeres 3-6 elongate and slender, thickened distally. Antennomeres 7-10 stouter, more thickened, 10th antennomere is the shortest among them. Terminal antennomere asymmetrical, elongate and blunt, twice as long as the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum opaque dorsally, broadly rounded anteriorly, narrower than the head, strongly narrowed postmedium toward base. Punctures vary in size but are generally larger than on the head, dense and coarse, regularly dispersed, with intervening spaces ranging from much smaller than to about as large as the punctures. Intervening spaces densely microreticulate. Also, anterolateral angles of pronotum densely punctate and microreticulate. Pubescence yellowish, short and dense, appressed. Scutellum truncate apically. Elytra strongly elongate, smooth dorsally. Postbasal transverse impression weak but broad and visible. Each sutural angle ends in a long dent (in females only?). Punctures large and deep, irregularly dispersed, getting much finer postmedium. Intervening spaces vary in size, ranging from smaller than

to twice as large as the punctures. Pubescence yellowish, comparatively short, fine and dense, appressed, with several very long erect tactile setae on the sides and the disc. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward postbasal impression. Legs long and slender. Female metatibiae slightly thickened in the median part. Female basal tarsomere of the metathoracic legs longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in female broadly rounded on apical margin and covered with dense long setae (Fig. 143). Morphological sternite VII in female broadly rounded on apical margin and covered with dense setae (Fig. 144).

Sexual dimorphism: Male is unknown.

Ecology & biology: Collected at an altitude of 150 m.

Differential diagnosis: This species is very distinctive due to modifications of the elytral apices (only by females?).

Distribution: Only known from Palawan Island (the Philippines).

***Sapintus* (s. str.) *anguliceps* (LaFerté-Sénéctère, 1849a)** (Figs 146-151, plate 59 figs 5-6)

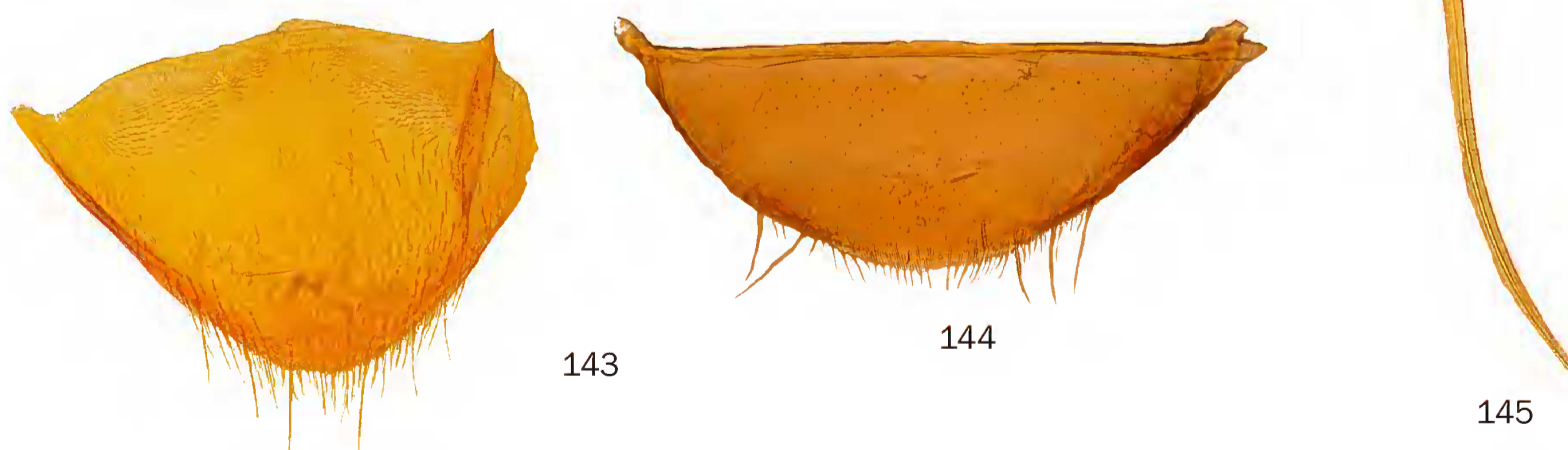
= *Anthicus anguliceps* LaFerté-Sénéctère, 1849b [duplicative description]

= *Sapintus apicatus* (Fairmaire, 1896) [consider new synonymy above]

= *Sapintus apicatus birmanicus* (Pic, 1907)

[consider new synonymy above]

Material: 1 specimen BMNH, Spore / SINGAPORE: C.J.Saunders. B.M.1933-227.; 1 specimen ZIN, ВЬЕТНАМ, горы NW ТХАЙ-НГУЕН, 300 м, 13.9.1962 г., Кабаков; 1 specimen ZIN, 60 км W Винь-Линь, Вьетнам, 100-500 м, Кабаков, 18.III.1963; 9 specimens ZIN, 2 specimens DTC, Ср. Вьетнам, р. Кон Фукун, 9.10.1963, Кабаков; 2 specimens ZIN,



Figures 143-145. *Sapintus angulapex* sp. nov., holotype ♀. 143 – Tergite VII; 144 – Sternite VII; 145 – Spiculum gastrale.



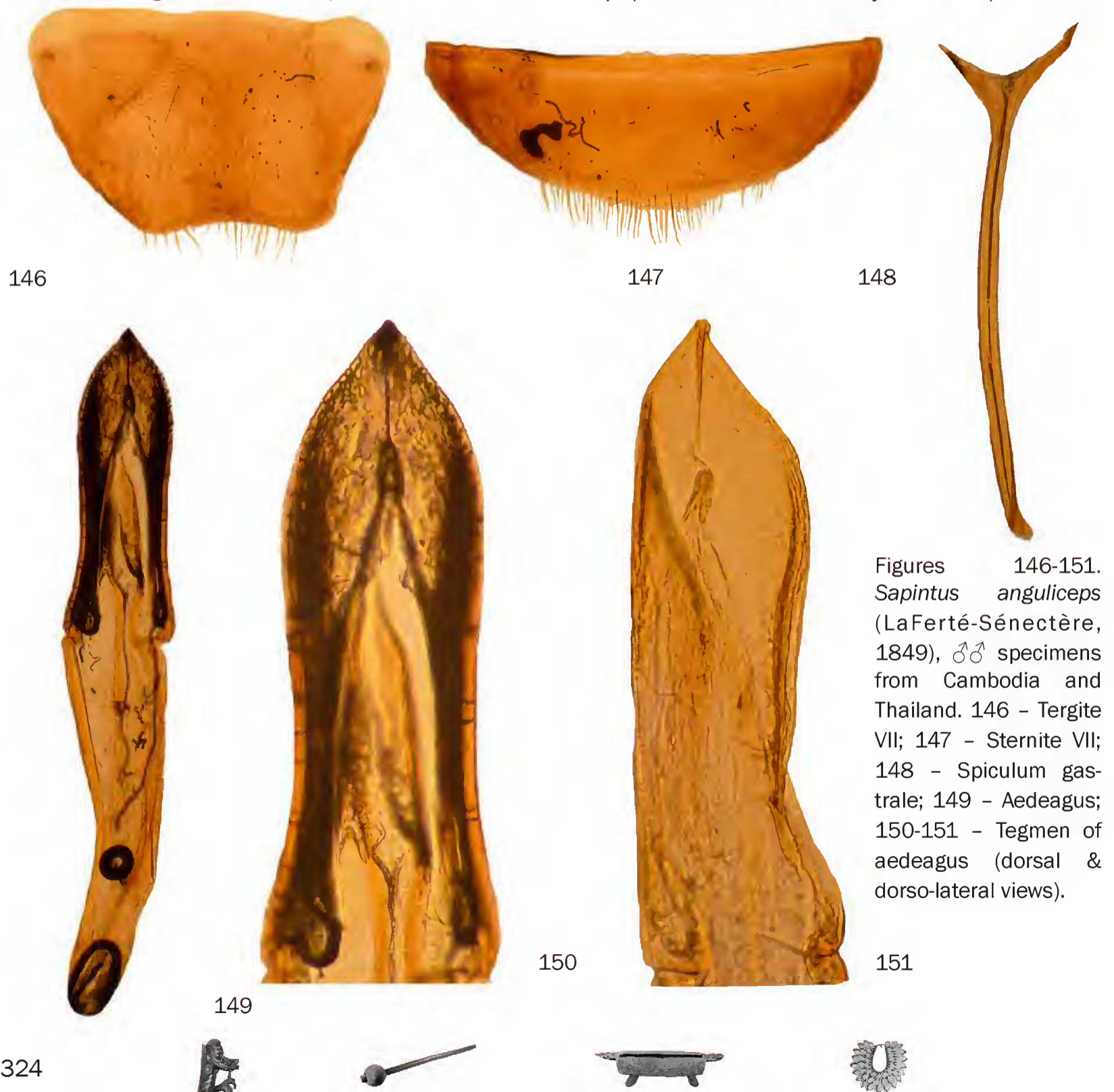
1 specimen DTC, Сев. Вьетнам, 40 км NO Тхайнгуен, 30.10.1963, Кабаков; 2 specimens MHUB, Borneo, Sabah Kinabatangan 22.VIII.2005, LF leg. Mey & Ebert; 1 specimen NME, THAILAND Khao Lak, Hotel Similana, 2 km NE, geklopft U.Schmidt 8.-22.XI.2007; 1 specimen IRSN, Coll. I.R.Sc.N.B. Cambodia, Pursat prov. Phnom Samkos W.S. Pramaoy, forest edge Light trap 16.iv.2005 Leg. K. Smets & I. Var; 2 specimens NME, S-Thailand, ca. 8km s. Khao Lak, 08° 36'36"N 098° 14'61"E plantage, Umg. Merlin resort leg. A. Skale, 30.7. - 11.8.2007; 56 specimens NME, 5 specimens DTC, INDIA, Tamil Nadu Distr. Vilupparam Auroville, 12° 0'N 79° 48'E, leg. F. Burger 01.VIII.-05.X.2012; 2 specimens NME, 2 specimens DTC, VIETNAM, N, Ninh Binh Pr. 90 km SW Hanoi Cuc PhuongNP, primat [sic!] rescue centre, 25.IV. / 2012, 190m, 20° 14'24"N 109° 42'53"E, leg. A. Weigel, light trap.

Remarks: All published records and identifications of *S. anguliceps* made by Uhmman need fur-

ther confirmation, because this author not studied the type of this species.

***Sapintus* (s. str.) *aucklandensis* (Werner, Chandler, 1995)**

Material: 1 specimen BMNH, ? NEW ZEALAND / Sharp Coll. 1905-313.; 1 specimen OUNH, Auckland H.Swale / ex. J. J. Walker bequest 1939; 3 specimens OUNH, Nelson NZ-2/02 JJWalker / ex. J. J. Walker bequest 1939; 5 specimens OUNH, 2 specimens DTC, Wellington NZ 8/1902 JJWalker / ex. J. J. Walker bequest 1939; 4 specimens OUNH, Wellington, N.Z. J.J.Walker. Aug. 1902 / ex. J. J. Walker bequest 1939; 1 specimen OUNH, 1 specimen DTC, 15. IX. 1939. N.ZEALAND, Wellington, Paekakariki. G.V.HUDSON. 1010-1940; 10 specimens BMNH, 2 specimens DTC, litter / AK: 12km S Waiuku / NEW ZEALAND B.M. 1984-80 P.M.Hammond; 2 specimens BMNH, litter / AK: TUAKAU 9.xi.1983 / NEW ZEALAND B.M. 1984-80 P.M.Hammond; 1 specimen BMNH, grass heaps / AK:Auckland Wattle Bay 11.i.1984 / NEW ZEA-



Figures 146-151. *Sapintus anguliceps* (LaFerté-Sénéctère, 1849), ♂♂ specimens from Cambodia and Thailand. 146 - Tergite VII; 147 - Sternite VII; 148 - Spiculum gastrale; 149 - Aedeagus; 150-151 - Tegmen of aedeagus (dorsal & dorso-lateral views).

LAND B.M. 1984-80 P.M.Hammond; 2 specimens BMNH, Tidal refuse / WO:Port Waikato shore debris 12.ii.1984 / NEW ZEALAND B.M. 1984-80 P.M.Hammond; 1 specimen HMNH, NEW ZEALAND, Waikato District, Pirongia Forest, 21.I.1995, Z.Korsós.

Remarks: First records since original description.

***Sapintus* (s. str.) *bataviensis* (Marseul, 1882a)**
(Plate 59 figs 7-8)

= *Anthicus bataviensis* Marseul, 1882b [duplicative description]

Syntype RMNH: de Gavere Batavia [handwritten] / 132a bataviens [handwritten].

Remarks: Genital organs were not studied. There are lot of misidentifications of this species made and published by previous authors. All records of this species outside Java Island (locus typicus) to be considered doubtful, as type material was not studied by earlier authors. I give the photographs of this species for the first time.

***Sapintus* (s. str.) *bizonellus* (Marseul, 1882a)**
(Plate 59 figs 9-10)

= *Anthicus bizonellus* Marseul, 1882b [duplicative description]

Syntype RMNH: Hekmeyer Ardjoeno Java or [handwritten] / bizonellus 111a [handwritten].

Remarks: Genital organs were not studied. I give the photographs of this species for the first time.

***Sapintus* (s. str.) *botanicus* (Pic, 1952)** (Plate 60 figs 1-2)

Holotype MNHN: SAIGON [printed] 27. I. 49 [handwritten] J. BARBIER [printed] / v. botanicus mihi [handwritten].

Remarks: Refer to Telnov (2007c) for the information on nomenclature of this species. I give the photographs of this species for the first time.

***Sapintus* (s. str.) *bryanti* (Pic, 1911)** [consider new combination above]

Material: 4 specimens NHRS, Ma-landa / Queensl *Mjöberg* / Riksmuseum Stockholm; 1 specimen NHRS: Mt. Tam-bourine / Queensl. *Mjöberg* / Riksmuseum Stockholm; 5 specimens DTC, AUSTR.NSW. Border Ranges N. Pk. Sheep-station Crk.cmpgrnd 375m 6-8.I. 1991 Pollock & Reichert / cantharidin; 2 specimens HMNH, AUSTRALIA, N.S.W. Carai State Forest Kookaburra, 943 m / 31°01'434"S 152°20'288"E 27-28. X. 2000 leg. A. Podlussány.

Remarks: Uhmann (2007: 68) already mentioned New South Wales' locality as 'NSW, Border Ranges, NP'. For some reason I give full locality data for it.

***Sapintus* (s. str.) *carolinensis* (Werner, 1965)**
(Plate 45 figs 3-4)

Paratype ♀ DCC: KUSAIE, Pukusrik 1 m. [printed] IV-2 [handwritten] -53 J.F.G. Clarke [printed] / Mangrove [handwritten] / light trap [printed] / PARATYPE *Anthicus carolinensis* Werner [printed] ♀ [handwritten] / PARATYPE [printed, label blue].

Remarks: I give the photographs of this species for the first time.

***Sapintus* (s. str.) *cruciellus* (Marseul, 1882a)**

= *Anthicus cruciellus* Marseul, 1882b [duplicative description]

Holotype ♀ RMNH: *Anthicus* 928. *bifasciatus cruciellus* Java [handwritten] / Hekmeyer Ardjoeno Java or. [handwritten, label circular] / Holotype [printed, label red].

Remarks: This species is described from East Java and remains only known by the holotype (see also Telnov 2006). This species is generally very close to or even conspecific with widespread *S. gracilicornis* (Pic). The holotype of *S. cruciellus* is a female, so it remains impossible to compare the male genitalia of both taxa until the male specimens from the type locality of *S. cruciellus* are available. Antennomeres in *S. cruciellus* holotype are generally shorter than in the typical *S. gracilicornis*. On the other hand, *S. gracilicornis* is not yet confirmed from Java.

***Sapintus* (s. str.) *curvatus* sp. nov.** (Figs 152-158, plate 60 figs 3-4)

Holotype ♂ NME: THAILAND, Phang-nga Prov., Takua-pa distr., Khao Lak 08°37.623'N, 98°15.091'E, 50m 23.08.-02.09.2010, leg. A.Skale.

Paratypes 5 specimens: 2♂ & 1♀ NME, 1♂ DTC, same label as in holotype; 1♀ NME, S-THAILAND, ca 10km e. Khao Lak, 08°39'06"N, 098°17'22"E, Ton Chong Fah Waterfall leg. A. Skale, 03.08.2007.

Derivatio nominis: Named from the Latin 'curvatum' [curved], because of the modified male metatibiae.

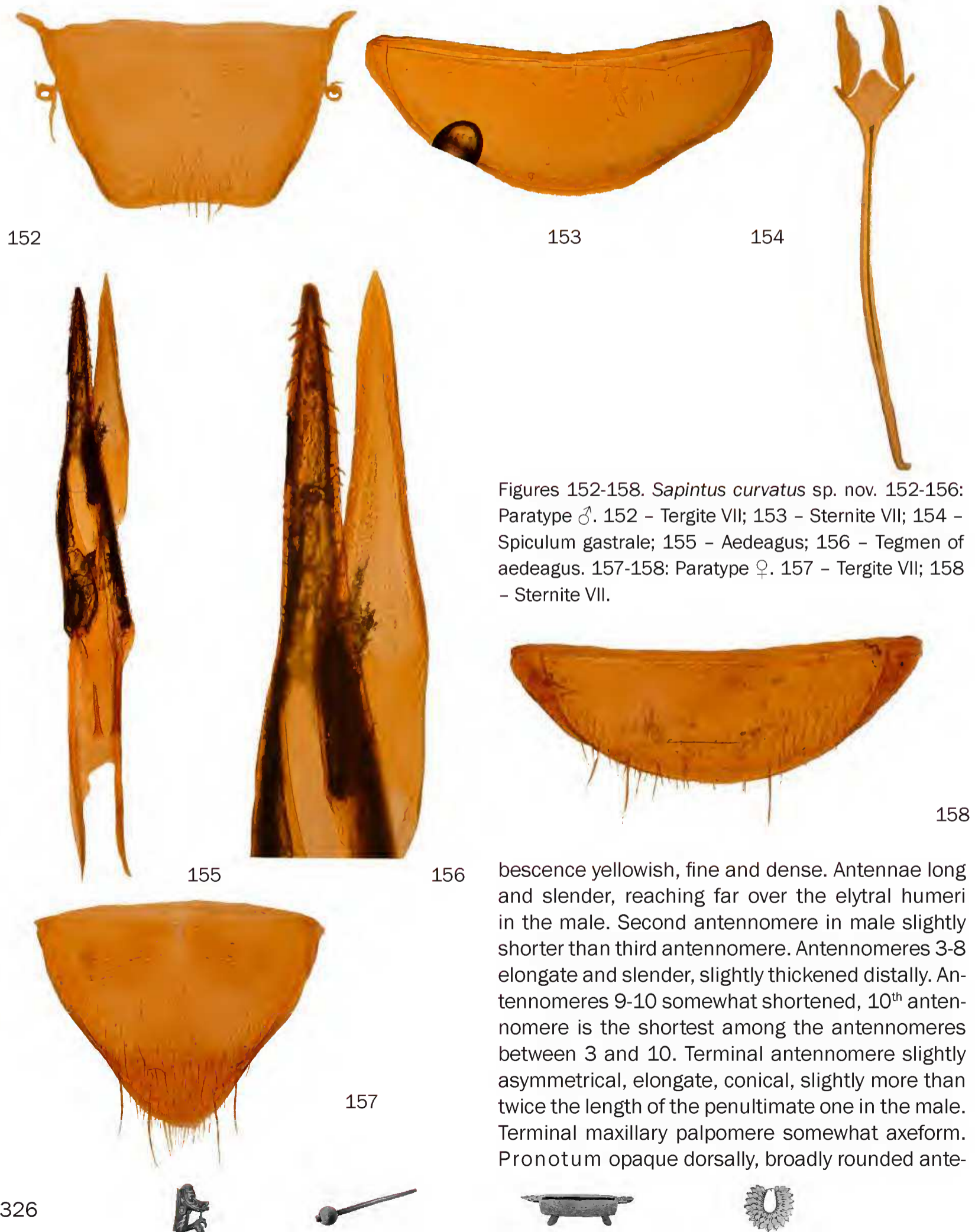
Measurements, holotype ♂: Total body length 3.06 mm, maximum combined width across the middle of elytra 0.84 mm. Head 0.61 mm long, across the eyes 0.62 mm broad, pronotum 0.62 mm long, maximum width 0.50 mm, elytra 1.83 mm long, 0.84 mm broad. Measurements, para-



type ♀: Total body length 2.85 mm, maximum combined width across the middle of elytra 0.82 mm. Head 0.58 mm long, across the eyes 0.61 mm broad, pronotum 0.58 mm long, maximum width 0.48 mm, elytra 1.69 mm long, 0.82 mm broad.

Description: Dorsum dark orange, elytra with black markings in the form of a median transverse band (complete or narrowly interrupted on the suture, always bearing the lateral margins of

the elytra) and a black apical spot. Legs, palpi and antennae yellow. Underside uniformly orange, trochanters yellow. Head smooth dorsally, with large and prominent eyes. Tempora slightly converged toward base, about a half of the length of the eye, with rounded temporal angles. Head base very broadly rounded, subtruncate. Punctures large and dense, but flat. Intervening spaces ranging from as large as the punctures to smaller than the punctures. Pu-



Figures 152-158. *Sapintus curvatus* sp. nov. 152-156: Paratype ♂. 152 - Tergite VII; 153 - Sternite VII; 154 - Spiculum gastrale; 155 - Aedeagus; 156 - Tegmen of aedeagus. 157-158: Paratype ♀. 157 - Tergite VII; 158 - Sternite VII.

bescence yellowish, fine and dense. Antennae long and slender, reaching far over the elytral humeri in the male. Second antennomere in male slightly shorter than third antennomere. Antennomeres 3-8 elongate and slender, slightly thickened distally. Antennomeres 9-10 somewhat shortened, 10th antennomere is the shortest among the antennomeres between 3 and 10. Terminal antennomere slightly asymmetrical, elongate, conical, slightly more than twice the length of the penultimate one in the male. Terminal maxillary palpomere somewhat axeform. Pronotum opaque dorsally, broadly rounded ante-

riorly, narrower than head, constricted postmedium toward base. Punctures larger than on the head, dense and coarse. Intervening spaces smaller or much smaller than punctures. Also, antero-lateral angles of pronotum densely punctate. Pubescence yellowish, long and dense, appressed. Scutellum rounded apically. Elytra strongly elongate, smooth dorsally. Punctures large, deep and dense, getting smaller postmedium. Intervening spaces vary in size, ranging from smaller than to about the same size of the punctures. Pubescence yellowish, long and dense, suberect, with several extraordinary long erect tactile setae on the sides and the disc. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward postbasal area. Legs long and slender. meso- and metatibiae in both sexes with 5-6 pairs of extraordinary erect setae on outer margin. Internal predistal margin of male metatibiae curved and with callus-like thickening. Basal tarsomere of both male and female metathoracic legs with a brush-like short and dense pubescence on underside, as long as the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male trapezoid, slightly excavated on apical margin (Fig. 152). Morphological sternite VII in male is short, broadly rounded on apical margin (Fig. 153). Aedeagus slender, with pointed and microdentate tegmen (Figs 155-156). Morphological tergite VII in female triangular, narrowly rounded on apical margin (Fig. 157). Morphological sternite VII in female short, broadly rounded on apical margin (Fig. 158).

Sexual dimorphism: Female metatibiae without modifications, only with extraordinarily long setae. Meso- and metathoracic legs setae comparatively shorter in the female than the male.

Variability: Specimens slightly vary in body length, from 2.70 mm to 3.06 mm.

Ecology & biology: No data available.

Differential diagnosis: This species is very specific due to modifications of the male metatibiae and the presence of 5-6 pairs of extraordinarily long setae on meso- and metatibiae in both sexes. Somewhat similar to *S. echinatus* sp. nov. (Indonesian Borneo), due to extraordinary setose meso- and metatibiae, but it clearly differs from it in that the male metatibiae are callus-like and thickened. Also similar to *S. bizonellus* (Marseul, 1882a) (Java) but this species specifically different in head shape and has simple male metatibiae.

Distribution: Only known from southern Thailand (Malay Peninsula).

Sapintus (s. str.) ***dybasi*** (Werner, 1965) (Plate 45
figs 7-8)

Paratype ♀ BMNH: Para-type [printed, label circular, border yellow] / KOROR I. Palau Islands 24Nov. 1947 [printed] / Pacific Sci.Board Ent.Surv.of Micronesia H.S.Dybas leg. [printed] / PARATYPE [printed] ♀ [handwritten] *Anthicus dybasi* Werner [printed] / PARATYPE [printed, label violet] / Brti.Mus. 1962-[printed] 619. [handwritten]

Remarks: I give the photographs of this species for the first time.

Sapintus (s. str.) ***echinatus*** sp. nov. (Figs 159-163,
plate 60 figs 5-6)

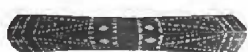
Holotype ♂ NME: **INDONESIA**, central Borneo, Prov. Kalimantan Barat, ~90 km E Putussibau N env., 0°53'N, 112°56'E, 07.I.2009, secondary rainforest, leg. A.Napolov.

Paratypes 16 specimens: 1 specimen BMNH, Borneo, Sabah Danum Valley 4°58'N: 117°47'E At Light June 1999 / BMNH{E} 2005-177 H. Mendel; 3 specimens NME, 4 specimens DTC, same label as in holotype; 2 specimens BMNH, INDONESIA: Borneo Kalimantan Tengah Busang / Rekut confl. 0°03'S, 113°59'E / August 2001 MV light Brendell / Mendel / 'Barito Ulu 2001' BMNH(E) 2001-191; 1 specimen BMNH, BORNEO, Sabah near Gum Gum Lower Kinabatangan June 2005, light trap / BMNH{E} 2005-178 H. Takano & T. Owen-Edmunds; 1 specimen MHUB, Borneo, Sabah Kinabatangan 22.VIII.2005, LF leg. Mey & Ebert; 1 specimen BMNH, BORNEO: Sabah, Danau Girang field stn. 24.vii.2008. W. Simondson / malaise trap. Secondary forest. Forest edge.; 1 specimen NME, 2 specimens DTC, **INDONESIA**, central Borneo, Prov. Kalimantan Barat, ~90 km E Putussibau N env., 0°53'N, 112°56'E, 10.I.2009, secondary rainforest, leg. A.Napolov.

Derivatio nominis: Named from the Latin 'echinatus' [bristly, spiny], because of the presence of extraordinarily long pronotal and elytral tactile setae and long setose tibiae.

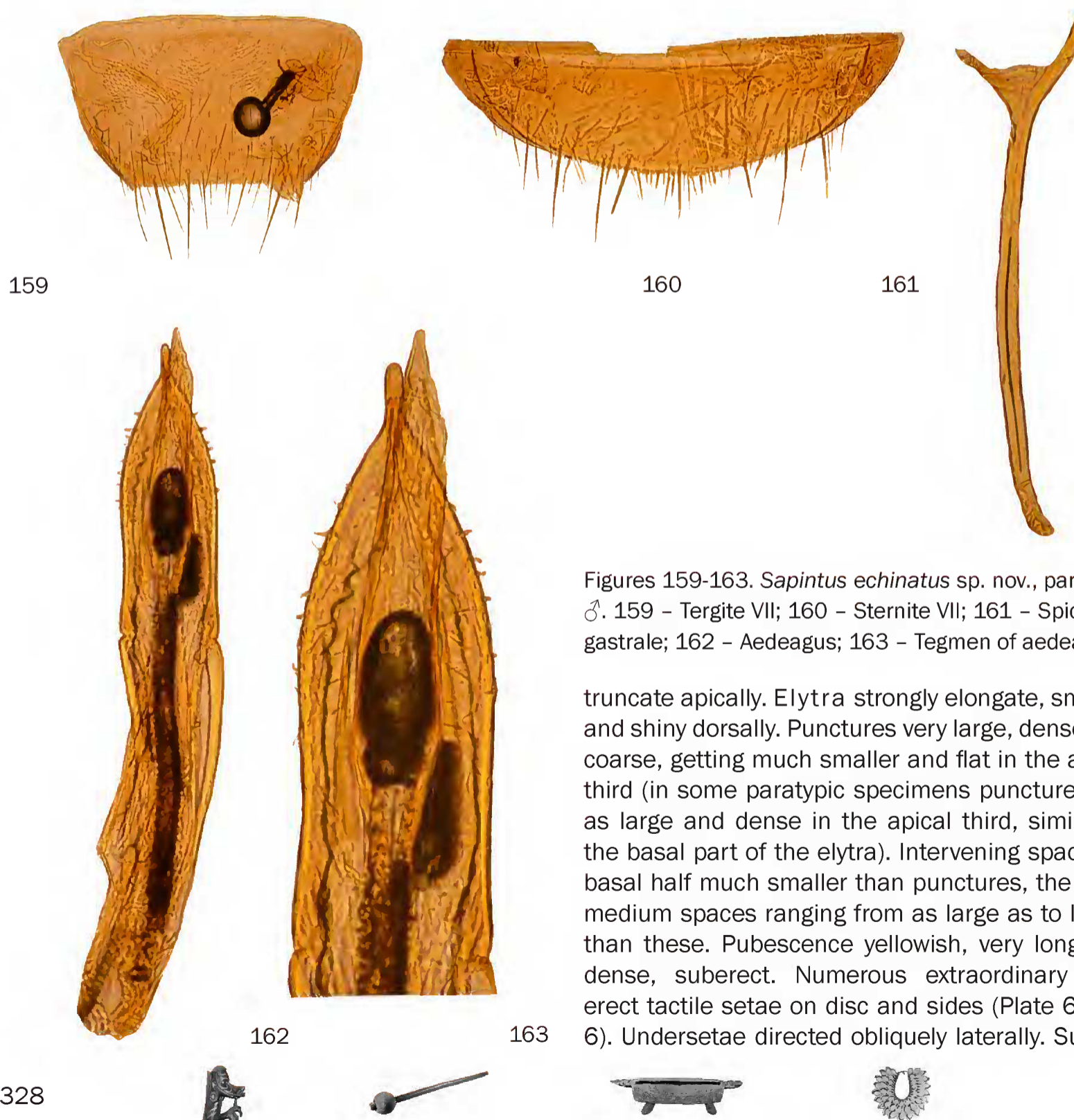
Measurements, holotype ♂: Total body length 3.35 mm, maximum combined width across the middle of elytra 1.00 mm. Head 0.70 mm long, across the eyes 0.61 mm broad, pronotum 0.60 mm long, maximum width 0.49 mm, elytra 2.00 mm long, 1.00 mm broad. Measurements, paratype ♀: Total body length 3.34 mm, maximum combined width across the middle of elytra 1.01 mm. Head 0.70 mm long, across the eyes 0.67 mm broad, pronotum 0.64 mm long, maximum width 0.58 mm, elytra 1.95 mm long, 1.01 mm broad.

Description: Dorsum and venter orange to dark



red, elytra with black markings. These black markings are variable in size and shape, consisting of a small humeral spot, a broad median transverse band (mostly not bearing the lateral margin of the elytra, interrupted on the suture or complete, posterior margin broadly excavated in the sutural area in case this band is complete), and a broad apical spot (extreme elytral apices are pale in most of the studied specimens). Antennae uniformly orange or dark orange. Legs yellow, in some paratype specimens meso- and metatibiae orange. Underside orange- or reddish brown with yellow pro- and mesocoxae. Head smooth and shiny dorsally, with midsized prominent eyes. Tempora almost as long as the eye length, with rounded temporal angles. Head base broadly rounded. Punctures large but flat and sparse. Intervening spaces ranging from smaller than to twice as large as the punctures. Pubescence yellowish, long and dense. Antennae long

and slender, reaching the postbasal impression of the elytra in the male. Second antennomere in male short, half the size of the third antennomere. Male antennomeres 4-10 elongate and evenly thickened; penultimate antennomeres not shorter and not thicker than preceding ones. Terminal antennomere elongate, bluntly conical, not or slightly longer than the penultimate one. Terminal maxillary palpomere somewhat axeform. Pronotum smooth and shiny dorsally, elongate, rounded anteriorly, significantly narrower than the head, with a feeble lateral prebasal transverse impression. Punctures large, dense and coarse, unevenly distributed, sometimes building continuous rows of 3-4 punctures almost without intervals. Intervening spaces vary in size, from much smaller to smaller than punctures. Pubescence yellowish, long, dense, appressed, with several extraordinary long erect tactile setae on the sides and on the disc. Scutellum



Figures 159-163. *Sapintus echinatus* sp. nov., paratype ♂. 159 - Tergite VII; 160 - Sternite VII; 161 - Spiculum gastrale; 162 - Aedeagus; 163 - Tegmen of aedeagus.

truncate apically. Elytra strongly elongate, smooth and shiny dorsally. Punctures very large, dense and coarse, getting much smaller and flat in the apical third (in some paratype specimens punctures are as large and dense in the apical third, similar to the basal part of the elytra). Intervening spaces in basal half much smaller than punctures, the post-medium spaces ranging from as large as to larger than these. Pubescence yellowish, very long and dense, suberect. Numerous extraordinary long erect tactile setae on disc and sides (Plate 63 fig. 6). Undersetae directed obliquely laterally. Sutural

striae complete, broad. Hind wings fully developed. Legs long and slender. Outer margin of all tibiae in both sexes with 6-7 pairs of extraordinarily long erect setae. Male protibiae with a weak thickening on median inner margin; distal part of inner margin densely setose. Male basal tarsomere of the metathoracic legs slightly longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male short, trapezoid, weakly excavated on apical margin and long setose (Fig. 159). Morphological sternite VII in male short and broad, broadly rounded on apical margin (Fig. 160). Aedeagus with tegmen pointed apically (Figs 162-163) and setose preapically on sides. Morphological tergite VII in female broadly rounded on apical margin.

Sexual dimorphism: Female antennomeres 4-7 comparatively shorter than in the male, more slender than female antennomeres 8-10. Female antennomere 10 shorter and slightly broader than antennomere 9. Female protibia not or very indistinctly thickened on inner margin.

Ecology & biology: Collected in secondary lowland rainforest, some of the specimens were attracted to light.

Differential diagnosis: This species is similar to several large and long setose Oriental and Wallacean species, for example *S. binhensis* (Pic, 1922) (Vietnam), *S. bizonellus* (Marseul, 1882a) (Java), *S. botanicus* (Pic, 1952) (Vietnam), *S. geminus* sp. nov. [described in this paper] (Sulawesi), *S. longehirsutus* (Pic, 1922) (Vietnam), *S. marseuli* (Pic, 1892) (widely distributed in East Asia), *S. trinotatipennis* (Pic, 1952) (Vietnam). *Sapintus echinatus* sp. nov. is specific primarily due to the presence of two rows of long setae on each tibia and by evenly elongate and thickened male antennomeres 4-10. *Sapintus trinotatipennis* also have similar male antennae, but the pronotum of this species is broader in anterior part and more strongly constricted toward the base; eyes are much larger and male protibiae are not thickened on the inner margin. In *S. binhensis* only antennomeres 7-9 are elongate, but not 4-6. Meso- and metatibiae bear very long setae in this species. *S. curvatus* sp. nov. (Southern Thailand) also have extraordinary setose meso- and metatibiae, but male metatibiae are callus-like and thickened predistally in this species. In *S. bizonellus* male antennomeres 4-10 not elongate nor thickened in this species.

Distribution: Known from West and Central Kalimantan (Indonesian Borneo).

***Sapintus* (s. str.) *flavonotatus* (Pic, 1908)** (Figs 164-165, plate 61 figs 6-7)

= *Sapintus barbei* Bonadonna, 1978 [consider new synonymy above]

= *Anthicus meritorius* Pic, 1914 [consider new synonymy above]

Holotype ♂ MNHN: Song Luong Blaise IX.02 [handwritten] / [text unreadable] / *Anthicus Blaisei* Pic in litteris [handwritten] / type [handwritten] / *flavonotatus* Pic type [handwritten].

Material: 1 specimen DTC, THAILAND occ.bor. 24.-28.04.1991 Chom Thong Jan Farkač leg.; 1 specimen DTC, S Vietnam, lam Dong pr., 120 NNE of Ho Chi Minh, Cat Tien National Park, 1-5.VII.1995; 2 specimens NHMB, 1 specimen DTC, LAOS:N-VIENTIANE PROV. VANG-VIENG, 300 m, N18°55'23" E102°26'55", 10-15.V. & 01-06.VI.2001, Jiří KOLIBAČ leg.; 1 specimen DTC, Coll. I.R.Sc.N.B. CAMBODIA Siem Reap, Angkor Thom 26.V.2003 Light trap Leg. J. Constant, K. Smets & P. Grootaert; 2 specimens IRSN, Coll. I.R.Sc.N.B. CAMBODIA, 8Km North of Sre Noi (road to AnlongVaeng) Light trap-29-V-2003 Leg Constant&Smets.

Remarks: I give the photographs of this species for the first time.

***Sapintus* (s. str.) *gracilentus* sp. nov.** (Figs 166-172, plate 60 figs 7-8)

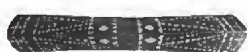
Holotype ♂ NME: ВЬЕТНАМ горы NW Бай-туонг у Ланг-тянь 9.2.1963 г. Кабаков.

Paratype ♀ DTC: same label as in holotype.

Derivatio nominis: Named from the Latin 'gracilentus' [slender, elongate], because of the slender body.

Measurements, holotype ♂: Total body length 2.98 mm, maximum combined width across the middle of elytra 0.76 mm. Head 0.71 mm long, across the eyes 0.58 mm broad, pronotum 0.63 mm long, maximum width 0.47 mm, elytra 1.64 mm long, 0.76 mm broad. Measurements, paratype ♀: Total body length 3.13 mm, maximum combined width across the middle of elytra 0.94 mm. Head 0.71 mm long, across the eyes 0.59 mm broad, pronotum 0.67 mm long, maximum width 0.51 mm, elytra 1.75 mm long, 0.94 mm broad.

Description: Dorsum uniformly orange brown, each elytron with a very narrow median transverse black spot and a dark circular sutural spot in the preapical area. Legs, palpi and antennae yellowish. Underside uniformly orange brown, pro- and mesocoxae yellow. Paratypic specimen is teneral, generally pale yellow with very indistinct dark markings on the elytra. Head strongly elongate, smooth



dorsally, with small, not prominent eyes. Tempora slightly converging toward base, about as long as the eye length, with rounded temporal angles. Head base rounded and feebly notched in the middle. Punctures fine and flat, larger near the eyes and on the frons, much sparser and smaller on the vertex. Intervening spaces about as large as the punctures on the frons, much larger than the punctures on the vertex. With a narrow and slightly convex median longitudinal impunctured line on the frons. Pubescence yellowish, fine and sparse. Antennae long and slender, in both sexes reaching the postbasal impression of the elytra. Second antennomere in male short, 1/2 the length of the third antennomere. Antennomeres 3-8 elongate and slender, of which 4-8 are thickened. Antennomeres 9-10 shorter than the preceding ones, thickened distally. Terminal antennomere elongate and blunt, two and a half times longer than the penultimate one. Terminal maxillary palpomere slightly axeform. Pronotum opaque dorsally, broadly rounded anteriorly, narrower than the head, strongly constricted post-medium toward base. Punctures large, dense and coarse, intervening spaces much smaller than the punctures. Also, antero-lateral angles of pronotum densely punctate. Pubescence yellowish, fine and

long, appressed, with 4-5 very extraordinary long erect tactile setae on the sides. Scutellum truncate apically. Elytra strongly elongate and slender, smooth dorsally. Humeral angles not indicated. Punctures large and deep, irregularly dispersed, getting much finer and sparser postmedium. Intervening spaces vary in size, ranging from smaller than to three times larger than the punctures. Pubescence yellowish, long and sparse, suberect, with several extraordinarily long erect tactile setae on sides and disc. Undersetae directed obliquely laterally. Sutural striae broad, developed from apices toward postbasal impression. Hind wings completely atrophied in both sexes (wingless). Legs long and slender. Male basal tarsomere of the metathoracic legs longer than the combined length of the remaining metathoracic tarsomeres. Morphological tergite VII in male truncate on apical margin and covered with dense long setae (Fig. 166). Morphological sternite VII in male broadly rounded on apical margin and covered with dense setae (Fig. 167). Aedeagus tegmen long pubescent (Figs 169-170). Morphological tergite VII in female broadly rounded on apical margin and covered with dense long setae (Fig. 171). Morphological sternite VII in female broadly rounded on apical margin and covered with dense setae (Fig. 172).

Sexual dimorphism: Antennomeres 4-7 are not thickened in the female like they are in the male.

No data available.

Ecology & biology: No data available.

Differential diagnosis: This species is specific due to its slender body, unlike any other known member of the genus. Another important character unique among Oriental and Indo-Australian species is the absence of hind wings.

Distribution: This species is only known from Northern Vietnam.

***Sapintus* (s. str.) *hartmanni* sp. nov.** (Figs 173-177 plate 52 fig. 7, plate 60 fig. 9)

Holotype ♂ NME: NEPAL, Prov. Bheri D: Banke, Nepal-ganj Hotel Kitchen Hut / 140m, NN, N28°04'97" E 81°38'56", on light 23.-25.VI.2011 leg.: M. Hartmann #02.

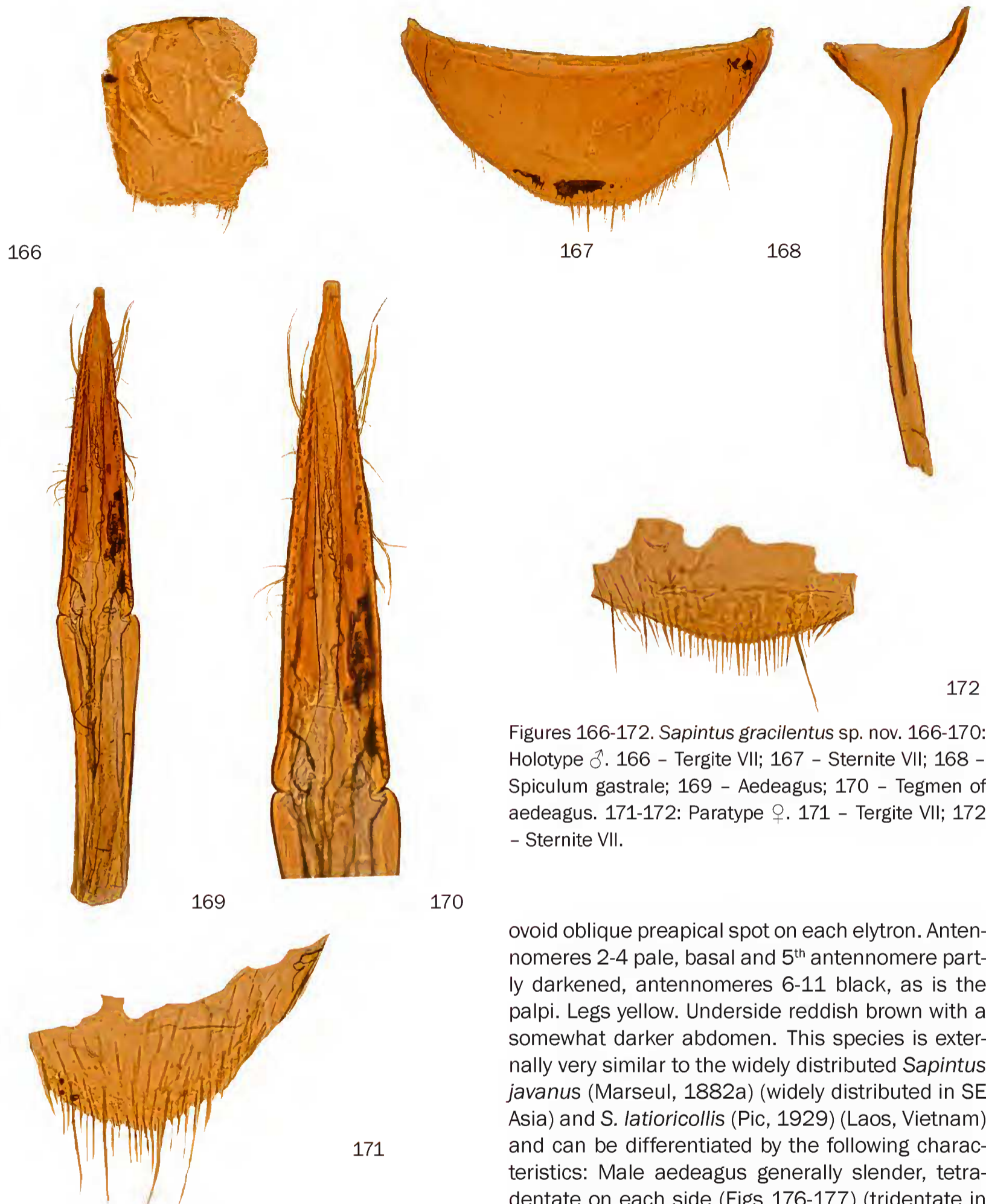
Derivatio nominis: Patronymic. Dedicated to the first collector, my good friend and respectful colleague, the director of the Naturkundemuseum in Erfurt (Germany), Mr. Matthias Hartmann.

Measurements, holotype ♂: Total body length 2.34 mm, maximum combined width across the middle of elytra 0.75 mm. Head 0.50 mm long, across the eyes 0.51 mm broad, pronotum 0.50



Figures 165-166. *Sapintus flavonotatus* (Pic, 1908), ♂ specimen from Sre Noi env., Cambodia. 164 - Aedeagus; 165 - Tegmen of aedeagus.





Figures 166-172. *Sapintus gracilentus* sp. nov. 166-170: Holotype ♂. 166 - Tergite VII; 167 - Sternite VII; 168 - Spiculum gastrale; 169 - Aedeagus; 170 - Tegmen of aedeagus. 171-172: Paratype ♀. 171 - Tergite VII; 172 - Sternite VII.

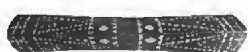
mm long, maximum width 0.49 mm, elytra 1.34 mm long, 0.75 mm broad.

Description: Forebody very dark red, base of pronotum somewhat paler. Elytra black or with large pale markings. These markings consist of a large postbasal yellow-to-orange spot (almost fused together on the suture, bearing the lateral margins of elytra) covering 1/3 of the elytra, and a smaller

ovoid oblique preapical spot on each elytron. Antennomeres 2-4 pale, basal and 5th antennomere partly darkened, antennomeres 6-11 black, as is the palpi. Legs yellow. Underside reddish brown with a somewhat darker abdomen. This species is externally very similar to the widely distributed *Sapintus javanus* (Marseul, 1882a) (widely distributed in SE Asia) and *S. latioricollis* (Pic, 1929) (Laos, Vietnam) and can be differentiated by the following characteristics: Male aedeagus generally slender, tetradentate on each side (Figs 176-177) (tridentate in *S. javanus*, simple in *S. latioricollis*). Antennomeres 7-8 in male less elongate, more thickened. Morphological tergite VII in male broadly trapezoid, shallowly excavate on apical margin (Fig. 173). Morphological sternite VII in male very short, broadly rounded on apical margin (Fig. 174).

Sexual dimorphism: Female is unknown.

Ecology & biology: Attracted to light at an altitude of 140 m.



Distribution: This species is only known from south-western Nepal.

Sapintus (s. str.) **lao** sp. nov. (Figs 178-182, plate 62 figs 1-2)

Holotype ♂ NHMB, LAOS:N-VIENTIANE Prov., VANG-VIENG, 300 m, N18°55'23" E102°26'55", 10-15.v. & 01-06.vi.2001, Jiří KOLIBÁČ leg.

Paratypes 3 specimens: 1♂ DTC, same label as in the holotype; 1♂ NHMB, LAOS: S-UDOMXAI Prov. PAK BENG, 450 m N 19°53'37", E 101°07'51" 18-27.v.2001 Jiří KOLIBÁČ leg.; 1♂ NHMB, LAO, Phongsaly prov., 21°41'2"N 102°06'8"E, 28.v.-20.vi.2003, PHONGSALY env., ~1500m, Brancucci leg.

Derivatio nominis: Named after Laos, the country of origin of this species.

Measurements, holotype ♂: Total body length 3.12 mm, maximum combined width across the middle of elytra 0.92 mm. Head 0.62 mm long,

across the eyes 0.59 mm broad, pronotum 0.60 mm long, maximum width 0.49 mm, elytra 1.90 mm long, 0.92 mm broad.

Description: Dorsum orange or pale orange, each elytron with dark humeri, dark median transverse band prolonged on anterior and broadly excavated on posterior margin, and with dark apical spot (leaving the very apex of elytra pale). Appendages yellow. Underside uniformly orange. Head smooth dorsally, with mid-sized prominent eyes. Tempora rounded in broad arc together with the base. Punctuation sparse, intervening spaces much larger than punctures. Pubescence yellowish, fine and long, sparse. The antennae long and slender, in male reaching over the anterior third of the elytra. The second antennomere in male 1/4 shorter than the third antennomere. Antennomeres 3-10 elongate and slender, of them 4-10 thickened and elongate-cylindrical. Antennomeres 9-10 slightly shorter than preceding. Terminal antennomere



Figures 173-177. *Sapintus hartmanni* sp. nov., holotype ♂. 173 - Tergite VII; 174 - Sternite VII; 175 - Spiculum gastrale; 176 - Aedeagus; 177 - Tegmen of aedeagus.

elongate pointed, only 1/5 longer than penultimate one. Terminal maxillary palpomere slightly axeform. Pronotum smooth dorsally, broadly rounded anteriorly, narrower than the head, constricted laterally postmedium. Punctuation large and coarse, intervening spaces (especially on the disc) smooth but much smaller than the punctures. Also anterolateral angles of pronotum are coarse punctate. Pubescence yellowish, fine and long, appressed, with some extraordinary long and erect tactile setae on sides and on the disc. Scutellum truncate apically. Elytra elongate, smooth dorsally. The humeral an-

gles broadly rounded. Puncturation large and deep in the basal half (larger than on the pronotum), dispersed irregularly but arranged in a single row each side of the suture. Punctures getting much finer and sparser postmedium. Intervening spaces vary in size, smaller than (in basal half) to three times larger than punctures (in posterior half). Pubescence yellowish, very long and dense, suberect, with several extraordinary long erect tactile setae on sides and the disc. Undersetae directed more or less strongly obliquely laterally. Sutural striae broad, completely developed. Hind wings fully developed. Legs long and slender. Male basal tarsomere of the metathoracic legs as long as combined length of remaining metathoracic tarsomeres. Morphological tergite VII in the male truncate and shallowly excavated on apical margin, with few very long setae (Fig. 178). Morphological sternite VII in the male broadly rounded on apical margin (Fig. 179). Aedeagus with strongly prolongate tegmen apex (Fig. 181-182).

Sexual dimorphism: Female is unknown.

Ecology & biology: Collected at altitudes of 300 & 1500 m.

Differential diagnosis: This species is specific due to elongate and slightly thickened male antennomeres 4-10, as also because of generally slender body and specific elytral colouration. *S. pilipennis* (Pic, 1952) (Thailand, Vietnam) is quite similar in colour, but its body is less elongate and antennomeres 4-10 are simple, not modified. *S. anguliceps* (LaFerté-Sénéctère, 1849) (widely distributed in tropical SE Asia) is also similar in colour pattern and dorsal puncturation, but differs in having simple, not modified antennomeres and in different shape of aedeagus.

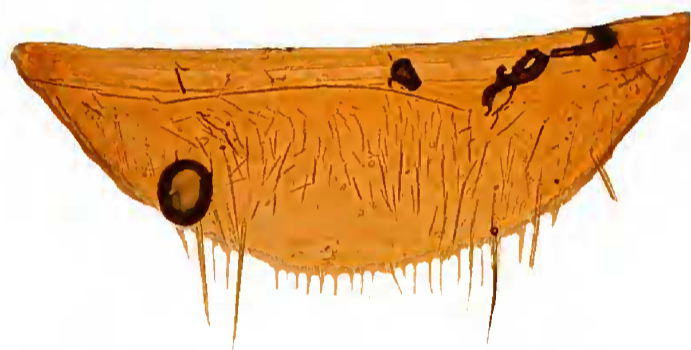
Distribution: This species is only known from Laos.

***Sapintus* (s. str.) *latioricollis* (Pic, 1929)** [consider new combination above]

Material: 2♂♂ DTC, S Vietnam, Lam Dong pr., 120 NNE of Ho Chi Minh, Cat Tien National Park, 5-6.VII.1995; 1 specimen NHMB, LAOS: S-UDOMXAI Prov. PAK BENG, 450 m N 19°53'37", E 101°07'5 18-27.v.2001 Jiří KOLIBAČ leg.

Additional Vietnam records published by Telnov (1997, 1998) as *S. sodalis* (Pic).

Remarks: This species is very similar to *S. javanus* (Marseul, 1882a) and *S. hartmanni* sp. nov. (see new description above), but it differs in the simple, non-dentate male aedeagus.

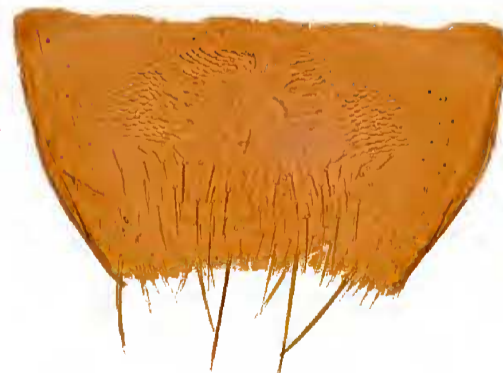


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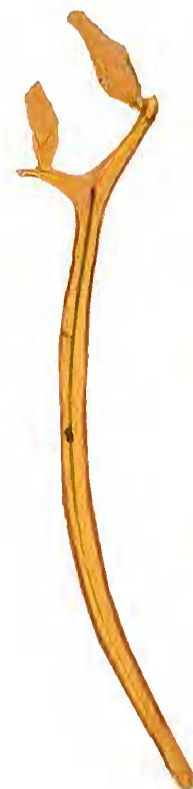


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182



179



180

Figures 178-182. *Sapintus lao* sp. nov., paratype ♂. 178 - Sternite VII; 179 - Tergite VII; 180 - Spiculum gastrale; 181 - Aedeagus; 182 - Tegmen of aedeagus.



***Sapintus* (s. str.) *marseuli* (Pic, 1892)** (Plate 62
figs 3-4)

= *Sapintus triparticornis* (Pic, 1926) [consider
new synonymy above]

Material: 1 specimen DTC, Vietnam (Central), Thanh
Hoa prov., Langchanh, 12.III.1963, leg. O.L.Kabakov; 1
specimen DTC, Vietnam N, Laichan prov., W Sapa, Bin-
hen (500-600m), 28.V-2.VI.1963, leg. O.L.Kabakov.

Remarks: After careful examination of the type
specimens of both taxa stored in MNHN, I came
to the conclusion that *S. triparticornis* (originally
described from Lac Tho, Central Vietnam, as *Anthi-
cus* s. l., moved to *Sapintus* by Telnov (2007c: 34))
is conspecific with the widespread East Asian *S.
marseuli* (known from Japan, the eastern parts of
China, Taiwan, Thailand, Vietnam.) A record of this
species from Nepal needs further confirmation.

***Sapintus* (s. str.) *obscuricornis* (Broun, 1880)**

Material: 2 specimens BMNH, New Zealand. Ex Sim-
son.; 4 specimens OUNH, Westport, N.Z. J.J.Walker
Nov. 1901 / *Anthicus obscuricornis* Broun / ex. J. J.
Walker bequest 1939; 2 specimens DTC, Westport, N.Z.
J.J.Walker Nov. 1901 / ex. J. J. Walker bequest 1939; 2
specimens OUNH, Westport, N.Z. J.J.Walker Nov. 1901 /
Anthicus anthracinus Broun; 2 specimens OUNH, Picton,
N.Z. J.J.Walker Feb 1902 / ex. J. J. Walker bequest 1939;
2 specimens BMNH, New Zealand. / Sharp Coll. 1905-
313.; 2 specimens BMNH, Mouri Creek / New Zealand. /
Sharp Coll. 1905-313.

***Sapintus* (s. str.) *pellucidipes* (Broun, 1880)**

Material: 1 specimen BMNH, New Zealand. ex. Sim-
son. / 130 / G.C.Champion Coll. B.M.1927-409; 1 speci-
men OUNH, Wellington Dist. N.Z.N.Id G.V.Hudson / ex.
J. J. Walker bequest 1939; 3 specimens OUNH, Waitak-
erei NZ 5/1902 JJWalker. / *Anthicus pellucidipes* Broun
/ ex. J. J. Walker bequest 1939; 1 specimen OUNH, Te
Aroha NZ 5/1902 JJW. / ex. J. J. Walker bequest 1939;
1 specimen OUNH, Wellington, N.Z. J.J.Walker. Oct 1902
/ *Anthicus obscuricornis* Broun; 2 specimens OUNH, 2
specimens DTC, Wellington NZ 10/1902 JJWalker / ex.
J. J. Walker bequest 1939; 1 specimen BMNH, sedges /
Matuka.Res: Bethells 29.x.1983 / NEW ZEALAND B.M.
1984-80 P.M.Hammond; 3 specimens BMNH: debris
by tidal Creek / AK:Bethells Beach.5.xi.1983 / NEW
ZEALAND B.M. 1984-80 P.M.Hammond; 4 specimens
BMNH, AK:Bethells Beach.5.xi.1983 / NEW ZEALAND
B.M. 1984-80 / P.M.Hammond; 2 specimens BMNH,
litter / AK: TUAKAU 9. xi. 1983 / NEW ZEALAND B.M.
1984-80 P.M.Hammond; 4 specimens BMNH, litter /
AK:Waitakere Ra. Cascades Kauri PK. 6.xi.1983 / NEW
ZEALAND B.M. 1984-80 P.M.Hammond; 1 specimen

BMNH, in agarics / AK: Ahuroa forest reserve 15.xi.1983
/ NEW ZEALAND B.M. 1984-80 P.M.Hammond; 5 speci-
mens BMNH, 1 specimen DTC, wet litter by stream / AK:
Ahuroa forest reserve 15.xi.1983 / NEW ZEALAND B.M.
1984-80 P.M.Hammond; 1 specimen DTC: grass heaps
/ CL: Kopu 16.xi.1983 / NEW ZEALAND B.M. 1984-80
P.M.Hammond; 1 specimen BMNH, Kauri forest litter /
AK:Waitakere Ra. 30.xi.1983. Nt.Huia / NEW ZEALAND
B.M. 1984-80 P.M.Hammond; 2 specimens BMNH,
litter / TK:Egmont N.P. Dawson Falls Rd. 550m. 6-7.
xii.1983 / NEW ZEALAND B.M. 1984-80 P.M.Hammond;
2 specimens BMNH, shore debris / TK: MANAIA Kaupo-
korui Beach 7.xii.1983 / NEW ZEALAND B.M. 1984-80
P.M.Hammond; 1 specimen BMNH, litter / TK: Everett
Pk. 8 km. ENE Inglewood 70m. 8.xii.1983 / NEW ZEA-
LAND B.M. 1984-80 P.M.Hammond; 1 specimen BMNH,
TK: MOKAU VALLEY 8.xii.1983 / NEW ZEALAND B.M.
1984-80 P.M.Hammond; 1 specimen BMNH, litter /
WO:Hamilton Gudex's Bush 9.xii.1983 / NEW ZEALAND
B.M. 1984-80 P.M.Hammond; 2 specimens BMNH, lit-
ter / ND:Waipoua St.F. Waipoua Stm., 120m. 10-11.
xii.1983 / NEW ZEALAND B.M. 1984-80 P.M.Hammond;
1 specimen BMNH, streamside / AK:Waipoua St. F.
Waipoua Stm. 120m. 10-12.xii.1983 / NEW ZEALAND
B.M. 1984-80 P.M.Hammond; 1 specimen BMNH, Under
log / AK:Wenderholm Scenic.Res.0-30m I.i.1984 / NEW
ZEALAND B.M. 1984-80 P.M.Hammond; 4 specimens
BMNH, damp litter / AK:Wenderholm Scenic.Res.0-30m
I.i.1984 / NEW ZEALAND B.M. 1984-80 P.M.Hammond;
4 specimens BMNH, litter / AK:Wenderholm Scenic.
Res.0-30m I.i.1984 / NEW ZEALAND B.M. 1984-
80 P.M.Hammond; 4 specimens BMNH, 1 specimen
DTC, Debris by stream / WA:Ruakokoputuna Blue
Rock Stm. 16.i.1984 / NEW ZEALAND B.M. 1984-80
P.M.Hammond; 1 specimen BMNH, cut grass heaps /
WN:LowerHutt garden debris 100m. 17.i.1984 / NEW
ZEALAND B.M. 1984-80 P.M.Hammond; 4 specimen
BMNH, 1 specimen DTC, forest litter / WA:Tuhitarata Res.
Lake Ferry 15m. 16.i.1984 / NEW ZEALAND B.M. 1984-
80 P.M.Hammond; 1 specimen BMNH, WN:LowerHutt
garden debris 100m. 17.i.1984 100m / NEW ZEALAND
B.M. 1984-80 P.M.Hammond.

***Sapintus* (s. str.) *pilipennis* (Pic, 1952)** (Figs 183-
187, plate 62 fig. 5)

Material: 2 specimens DTC, Vietnam N, 160 km NNW
Hanoi, Tuyen Quang prov., 3 km NE from Na Hang, Pac
Ban vill. env., 900 m, primary rain forest, 11.VI.1996,
leg. A. Napolov; 1 specimen DTC, Vietnam N, 160 km
NNW Hanoi, Tuyen Quang prov., 3 km NE from Na Hang,
Pac Ban vill. env., 900 m, primary rain forest, 12-14.
VI.1996, leg. A. Napolov; 1 specimen DTC, SICHUAN,
4 JUL 1995 JINSHA RIV. VAL. JINJIAN, 1400 m BOLM
lgt.; 2 specimens DTC, Vietnam - N, 180 km SSW Ha-



noi, 40 km SW Thanh Hoa, Ben En National Park, 50 m a.s.l., 23.VII-27.VIII.1998, leg. A.Napolov; 1 specimen NME, THAILAND, S, ca. 10km E Khao Lak, 08°39'06"N 98°17'22"E, Ton Chong Fah Waterfall, 03.VIII.2007 leg. A. Skale; 1 specimen NME, THAILAND Khao Lak, Hotel Similana, 2 km NE, geklopft U.Schmidt 8.-22.XI.2007.

Remarks: First records since original description. First records from Thailand and Yunnan (China). I give the photograph of this species for the first time.

***Sapintus* (s. str.) *pollocki* Uhmann, 1999** (Plate 62 figs 6-7)

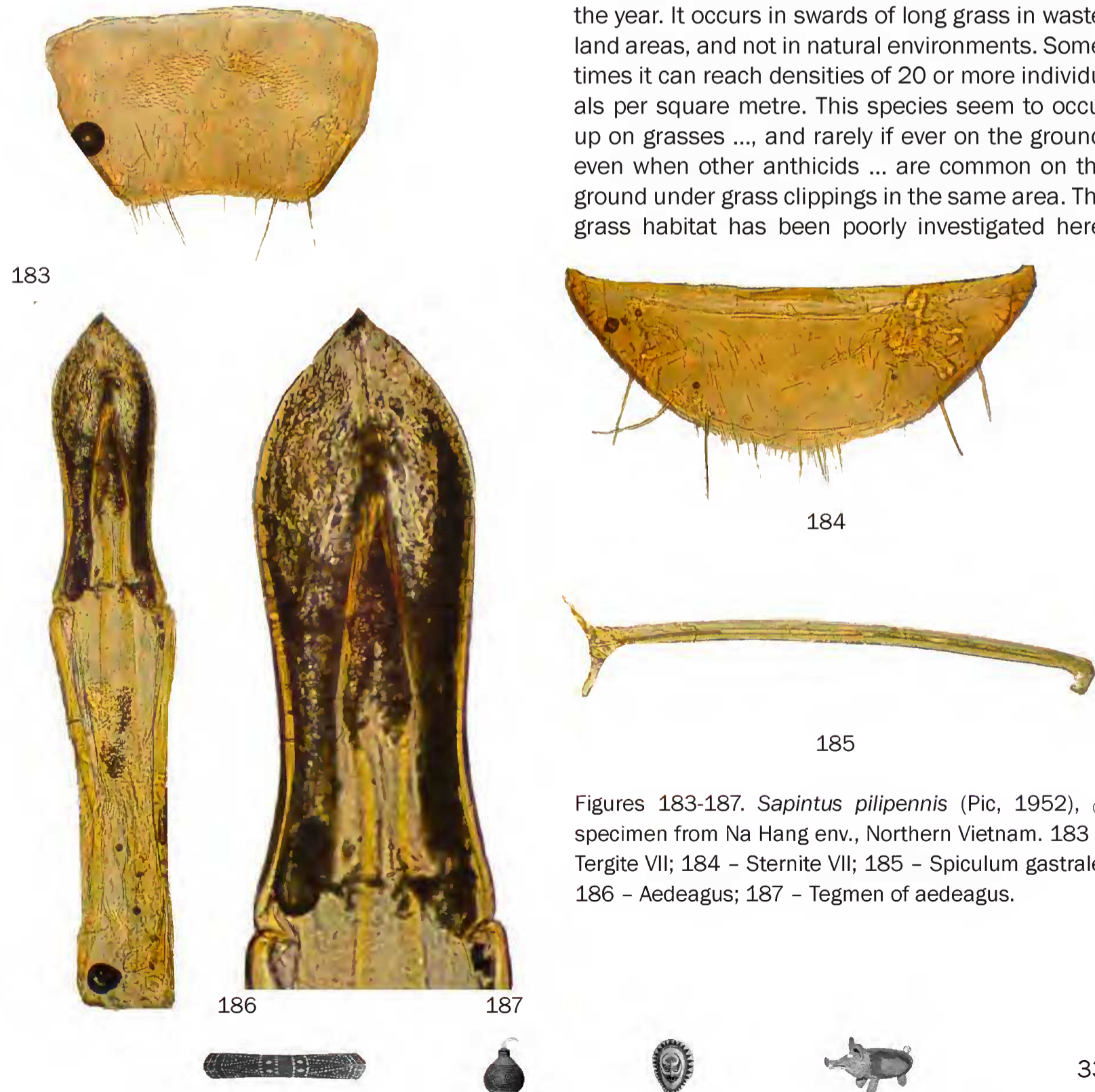
Material: 2 specimens HMNH, AUSTRALIA, 99.I.13. Queensland, Pinnocle village (camping) leg. A. Podlussány; 1 specimen DTC, AUSTRALIA, Queensland Tin Can Bay, 99.I.22. leg. A. Podlussány; 1 specimen HMNH, AUSTRALIA, NT, Mt. Bundey, 144 m, 13°13.5'S, 131°8.0E, / 4-7. XI. 2000, leg. A. Podlussány, G. Hangay & I. Rozner.

Remarks: Consider potential synonymy with *S. insulanus* (Pic, 1900) as stated under 'Remarks' in description of *S. insulanus* above. I give the photographs of this species for the first time.

***Sapintus* (s. str.) *rarus* (King, 1869)**

= *Sapintus deitzi* Werner, Chandler, 1995 [consider new synonymy above]

Remarks: *Sapintus rarus* have not yet been recorded from New Zealand, but synonymising *S. deitzi* with it adds New Zealand's North Island to the distribution area of this native Australian species. *S. deitzi* was described from the northern surroundings of Auckland (Parakai surroundings, collected by sweeping) and was known only from the locus typicus before. According to Thorpe (personal communication), 'this species is extremely common in the northern North Island of New Zealand (including Auckland), particularly during the cooler months of the year. It occurs in swards of long grass in wasteland areas, and not in natural environments. Sometimes it can reach densities of 20 or more individuals per square metre. This species seem to occur up on grasses ..., and rarely if ever on the ground, even when other anthicids ... are common on the ground under grass clippings in the same area. The grass habitat has been poorly investigated here,



Figures 183-187. *Sapintus pilipennis* (Pic, 1952), ♂ specimen from Na Hang env., Northern Vietnam. 183 - Tergite VII; 184 - Sternite VII; 185 - Spiculum gastrale; 186 - Aedeagus; 187 - Tegmen of aedeagus.

which is why there are so few literature records'. *Sapintus rarus* is among species, possibly occasionally introduced to New Zealand from Australia, where it occurs in the eastern part of the continent, from Tasmania to Queensland (Telnov; unpublished data).

***Sapintus* (s. str.) *siamensis* (Pic, 1914)** (Figs 188-192)

Material: 1 specimen DTC, S Vietnam, Lam Dong pr., 120 NNE of Ho Chi Minh, Cat Tien National Park, 12.VII.1995 / A. Napolov leg.; 1 specimen DTC, Vietnam - N, 180 km SSW Hanoi, 40 km SW Thanh Hoa, Ben En National Park, 50 m a.s.l., 23.VII-27.VIII.1998, leg. A.Napolov; 1 specimen NME, S-Thailand, ca. 8km s. Khao Lak, 08° 36' 36" N 098° 14' 61" E plantage, Umg. Merlin resort leg. A. Skale, 30.7. - 11.8.2007; 1 specimen PAC, #1 of 18.vi.12 Wong Tong Lantau. HK; 1 specimen PAC: 11 of 25.IX.12 Lam Tsuen valley H.K.; 1 specimen DTC, 1 specimen PAC, #30 of Sept 2011 Wong Tong

Lantau. HK.

Remarks: First records from Hong Kong (and China).

***Sapintus* (s. str.) *subopaciceps* (Pic, 1913)** (Figs 193-197, plate 62 figs 8-9) [consider revised status above]

Material: 1 specimen DTC, **INDONESIA**, central Borneo, Prov. Kalimantan Barat, ~90 km E Putussibau N env., 0° 53' N, 112° 56' E, 02-10.I.2009, secondary rainforest, leg. A.Napolov.

Remarks: I give the photographs of this species for the first time.

***Sapintus* (s. str.) *testaceicolor* (Pic, 1913)** (Plate 63 figs 1-2)

Material: 1 specimen DTC, #22 of Apr 2011 Wang Tong Lantan. HK.

Remarks: First record since original description, first record from Hong Kong (and China). I give the photographs of this species for the first time.

***Sapintus* (s. str.) *vietnamensis* sp. nov.** (Figs 198-204, plate 63 figs 3-4)

Holotype ♂ NME: VIETNAM N, 180 km SSW Ha Noi, 40 km SW Thanh Hoa, Ben En NP, 50 m, 23.VII-27.VIII.1997,

188



191



192



189



190



Figures 188-192. *Sapintus siamensis* (Pic, 1914), ♂ specimen from Khao Lak env., Southern Thailand. 188 - Tergite VII; 189 - Sternite VII; 190 - Spiculum gastrale; 191 - Aedeagus; 192 - Tegmen of aedeagus.

secondary lowland forest, white light, leg. A.Napolov.
Paratypes 13 specimens [10 DTC, 3 NME]: same label as in the holotype.

Derivatio nominis: Names after the country of origin, Vietnam.

Measurements, holotype ♂: Total body length 2.58 mm, maximum combined width across the middle of elytra 0.88 mm. Head 0.53 mm long, across the eyes 0.53 mm broad, pronotum 0.45 mm long, maximum width 0.48 mm, elytra 1.60 mm long, 0.88 mm broad. Measurements, paratype ♀: Total body length 2.56 mm, maximum combined width across the middle of elytra 0.87 mm. Head 0.53 mm long, across the eyes 0.53 mm broad, pronotum 0.47 mm long, maximum width 0.48 mm, elytra 1.56 mm long, 0.87 mm broad.

Description: Dorsum and venter uniformly dark black-brown, in some paratypic specimens elytra are brown, slightly paler than black forebody. Anten-

nae brown with 2 basal antennomeres paler. Palpi brown. Legs brown to yellowish brown, paler than the rest of the body. Head opaque dorsally, with midsized, not very prominent eyes. Tempora almost as long as eye length, with broadly rounded temporal angles. Head base subtruncate. Punctures flat, crateriform, very dense and coarse, intervening spaces glabrous, much smaller than the punctures. Pubescence greyish, very fine and sparse. Antennae short, hardly reaching elytral humeri in both sexes. Second antennomere more or less as long as next one. Antennomeres 7-10 shortened and distinctly thickened, subcircular. Terminal antennomere asymmetric, bluntly conical, almost twice longer than penultimate one. Terminal maxillary palpomere broad, axeform. Pronotum opaque dorsally, broadly rounded anteriorly and the lateral margins distinctly constricted toward narrower base. Punctures like on the head but somewhat coarser, intervening spaces much smaller than



Figures 193-197. *Sapintus subopaciceps* (Pic, 1913), ♂ specimen from Putussibau env., Indonesian Borneo. 193 - Tergite VII; 194 - Sternite VII; 195 - Spiculum gastrale; 196 - Aedeagus; 197 - Tegmen of aedeagus.

the punctures. Pubescence greyish, very fine, quite dense. Scutellum truncate apically. Elytra elongate, smooth and shiny. Punctures very large and dense in basal half, getting more flat preapically. Intervening spaces irregular, as large as or smaller than punctures. Pubescence yellowish, very fine, quite dense, suberect. Undersetiae directed obliquely laterally. Sutural striae broad, developed from the middle toward apices. Hind wings fully developed. Legs slender. Male basal tarsomere of the metathoracic legs as long as combined length

of remaining metathoracic tarsomeres. Claws long. Male morphological tergite VII truncate on apical margin (Fig. 198). Male morphological sternite VII short and broad, broadly rounded on apical margin (Fig. 199). Aedeagus with strong basal hooks, tegmen is strongly prolonged and pointed on apex (Figs 201-202). Female morphological tergite VII narrowly rounded on apical margin (Fig. 203). Female morphological sternite VII short and broad,

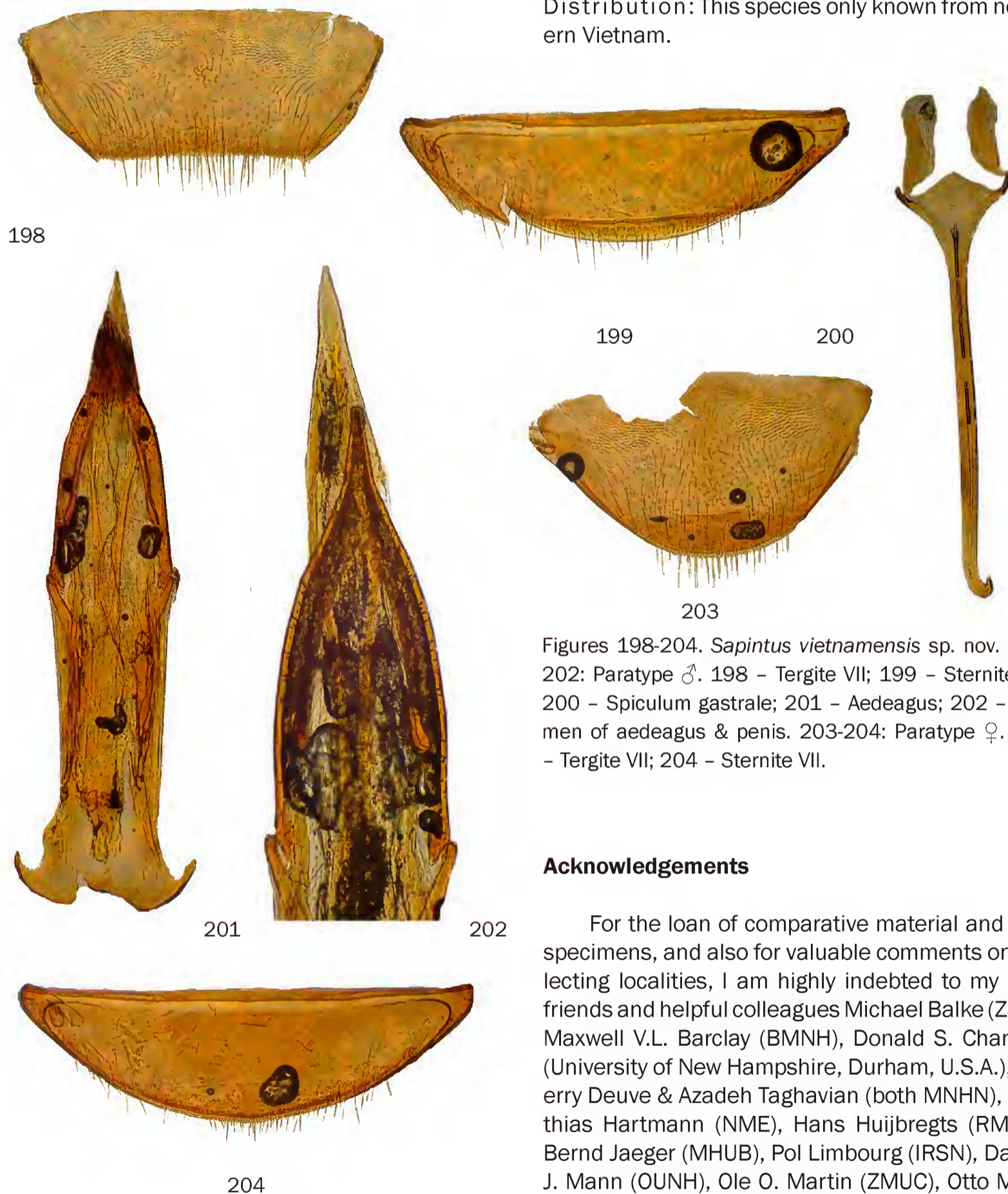
broadly rounded on apical margin (Fig. 204).

Sexual dimorphism: Not indicated.

Ecology & biology: Collected at altitude of 50 m in secondary lowland rainforest, attracted to white light.

Differential diagnosis: This is a typical uniformly coloured *Sapintus*, which is primarily specific due to the shape of aedeagus in combination with opaque forebody and truncate male morphological tergite VII.

Distribution: This species only known from northern Vietnam.



Figures 198-204. *Sapintus vietnamensis* sp. nov. 198-202: Paratype ♂. 198 - Tergite VII; 199 - Sternite VII; 200 - Spiculum gastrale; 201 - Aedeagus; 202 - Tegmen of aedeagus & penis. 203-204: Paratype ♀. 203 - Tergite VII; 204 - Sternite VII.

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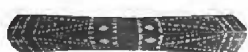
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References

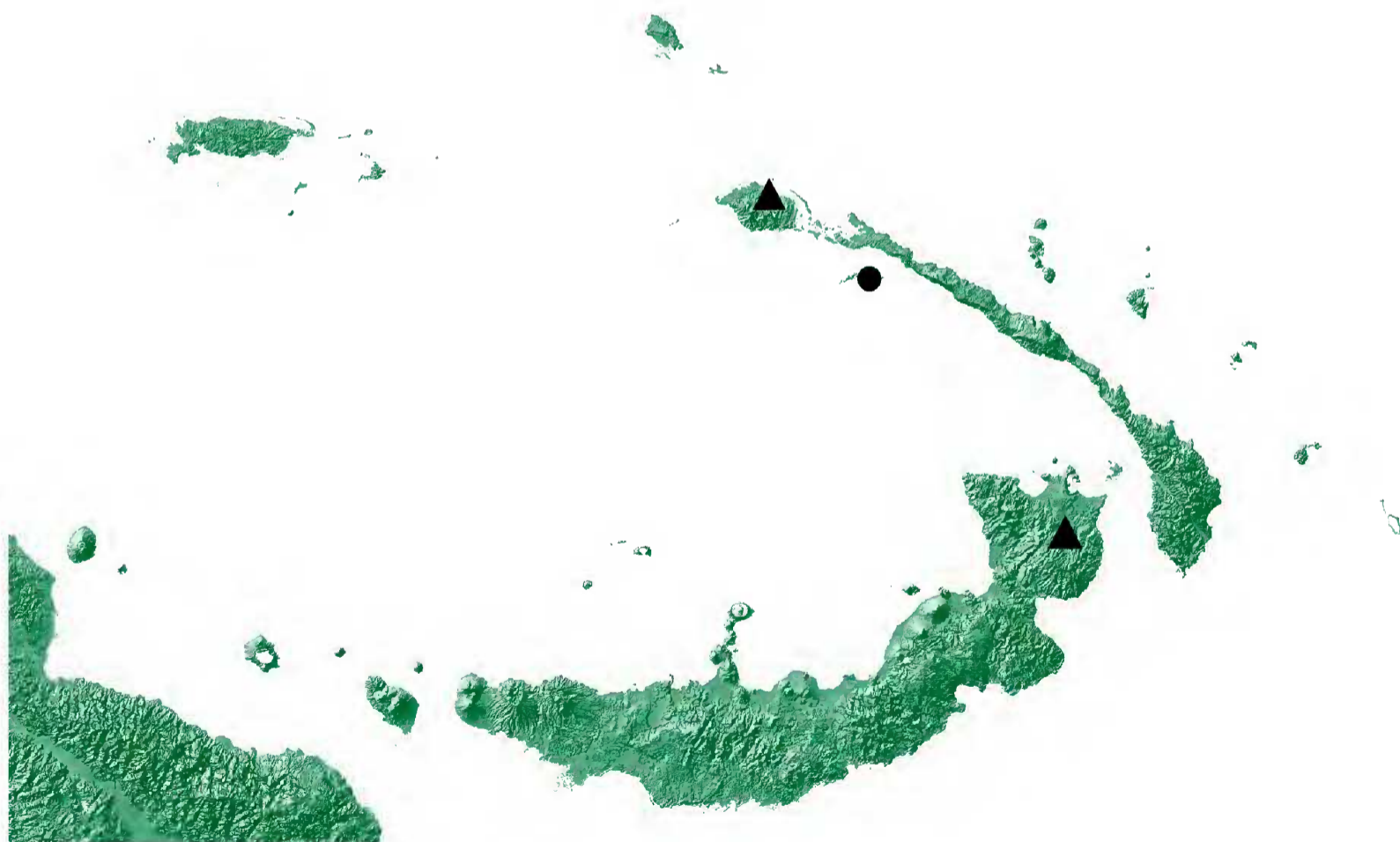
- Blair K.G. 1942. Coleoptera Heteromera from Guam: 56-60. In: Insects of Guam I. – *Bulletin of the Bernice P. Bishop Museum* **172**: i-v + 218 pp, 7 pls.
- Bonadona P. 1958. VI Insectes Coléoptères Anthicidæ. In: *Faune de Madagascar*. Tananarive-Tsimbazaza, Institut de recherche scientifique: 153 pp.
- Bonadona P. 1981. Anthicidae inédits (Coleoptera) des Iles Philippines et l'Archipel Bismarck (Insecta, Coleoptera). – *Steenstrupia* **7**, No. 8: 193-212.
- Bonadona P. 1986. Anthicidae (Coleoptera) de Sri Lanka. – *Entomologica scandinavica*, supplementum **30**: 55-75.
- Capocaccia L., Poggi R. 1982. Short history of the Museo Civico di Storia Naturale "Giacomo Doria" in Genoa, Italy. – *Archives of Natural History* **11**, No. 1: 107-122.
- Casey T.L. 1895. Coleopterological Notices. VI. – *Annals of the New York Academy of Sciences* **8**: 435-838.
- Chandler D.S. 2002. 117. Anthicidae Latreille 1819: 549-558. In: Arnett R.H., Thomas M.C., Skelley P.E., Frank J.H. (eds) *American Beetles. Polyphaga: Scarabaeoidea through Curculionoidea*. Volume **2**. London, New York, Washington, CRC Press, Boca Raton: 880 pp.
- Chandler D.S., Nardi G., Telnov D. 2004. Nomenclatural notes on the Palaearctic Anthicidae (Coleoptera). – *Mitteilungen des Internationalen Entomologischen Vereins e.V.* **29**, No. 4: 109-173.
- Görnitz K. 1937. Cantharidin als Gift und Anlockungsmittel für Insekten. – *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem* **4**: 116-157.
- Hemp C. 1994. Anthiciden und Cantharidin. Ein Beitrag zur chemischen Ökologie, Bionomie und Phylogenie der Ameisenkäfer (Coleoptera: Anthicidae). Dissertation zur Erlangung des Doktorgrades der Fakultät Biologie, Chemie und Geowissenschaften der Universität Bayreuth. Bayreuth: 1-131 + annexes [41 unnumbered pages] + acknowledgements [2 unnumbered pages]
- Hemp C., Dettner K. 1997. Morphology and chemistry of mesothoracic glands in Anthicid beetles (Coleoptera: Anthicidae). – *Entomologia generalis* **22**, No. 2: 97-108.
- Hemp C., Dettner K. 2001. Compilation of canthariphilous insects. – *Beiträge zur Entomologie* **51**, No. 1: 231-245.
- Hille J.C. van 1984. Monograph of *Aulacoderus* La Ferté, a subgenus of *Anthicus* Paykull (Coleoptera: Anthicidae). – *Annals of the Cape Provincial Museums (Natural History)* **15**, No. 1: 1-171.
- Hille J.C. van 1988. Three new South African species of *Aulacoderus* la Ferté, a subgenus of *Anthicus* Paykull (Coleoptera: Anthicidae). – *Annals of the Cape Provincial Museums (Natural History)* **16**, No. 12: 321-326.
- King R.L. 1869. Descriptions of the anthicides of Australia. – *The Transactions of the Entomological Society of New South Wales* **2**: 1-24.
- Kitayama C.Y. 1982. Biosystematics of anthicid larvae (Coleoptera: Anthicidae). – *The Coleopterists Bulletin* **36**, No. 1: 76-95.
- Krekich-Strassoldo H. von 1930. Beiträge zur Kenntnis malayischer Anthiciden II. – *Tijdschrift voor Entomologie* **73**: 251-262.
- Kuschel G. 1990. Beetles in a suburban environment: a New Zealand case study. The identity and status of Coleoptera in the natural and modified habitats of Lynefield, Auckland (1974-1989). – *DSIR Plant protection Report* **3**: 118 pp.
- LaFerté-Sénéctère F.T. de 1849a. *Anthicus* (Seconde Division), Livraison **8**, No. 28: 47-83, 1 pl. In: Guérin-Méneville F.-E. (ed.) *Species et iconographie générale des Animaux Articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal. Première Partie: Insectes Coléoptères (1846-1847)*. Paris, de Fain et Thunot.
- LaFerté-Sénéctère F.T. de 1849b. *Monographie des Anthicus et genres voisins, Coléoptères Hétéromères de la tribu des Trachélides* [1848]. Paris, De Sapia: i-xxii + 340 pp, pls. 17-32.
- Lea A.M. 1895. Descriptions of new species of Australian Coleoptera. – *Proceedings of the Linnean So-*



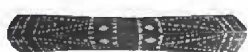
- ciety of New South Wales **9**, 2nd series: 589-634.
- MacLeay W. 1872. Notes on a collection of insects from Gayndah. – *Transactions of the Entomological Society of New South Wales* **2**: 239-318.
- Mawdsley J.R. 1994. Mimicry in Cleridae (Coleoptera). – *The Coleopterists Bulletin* **48**, No. 2: 115-125.
- Marseul S.A. de 1882a. Espèces nouvelles de Coléoptères de la famille des Pédilides et Anthicides du Musée Royal d'hist. nat. à Leyde. – *Tijdschrift voor Entomologie* (1881-1882) **25**: 54-64.
- Marseul S.A. de 1882b. New species of Coleoptera belonging to the families Pedilidae and Anthicidae. – *Notes from the Leyden Museum* **4**: 112-124.
- Pic M. 1895. Description de Coléoptères nouveaux. – *Le Naturaliste* **17**: 94.
- Pic M. 1900. Diagnoses d'Anthicidae de la Nouvelle Guinée. – *Annali del Museo Civico di Storia Naturale "Giacomo Doria" Series 2a*, **20**: 602-608.
- Pic M. 1902. Anthicidae exotiques nouveaux du Musée national Hongrois. – *Természetrázi füzetek* **25**: 405-410.
- Pic M. 1910. Coléoptères exotiques nouveaux ou peu connus (suite). – *L'Échange, Revue Linnéenne* **26**: 69-71.
- Pic M. 1911. Anthicidae; Pars 36. In: Schenkling S. (ed.) *Coleopterorum Catalogus*. Berlin, W. Junk: 102 pp.
- Pic M. 1913. H. Sauter's Formosa-Ausbeute. Anthicidae, Pedilidae und Hylophilidae. – *Archiv für Naturgeschichte* **79**: 129-135.
- Pic M. 1929. Nouveautés diverses. – *Mélanges exotico-entomologiques* **53**: 1-36.
- Pic M. 1952. Hétéromères africains nouveaux (Coléoptères). – *Revue de zoologie et de botanique africaines* **46**, No 1/2: 60-80.
- Pic M. 1955. Nouveaux Coléoptères congolais de diverses familles. – *Revue de zoologie et de botanique africaines* **52**, No. 1/2: 85-96.
- Schenkling S. 1906. Die Cleriden des Deutschen Entomologischen National-Museums, nebst Beschreibungen neuer Arten. – *Deutsche Entomologische Zeitschrift* **1906**, No. 1: 241-321, pl. 2.
- Ronchetti L., Colombini I., Chelazzi L. 1986. Researches on the coast of Somalia. The shore and the dune of Sar Uanle. 40. Anthicidae (Coleoptera). – *Monitore zoologico italiano, Supplemento* **21**, No. 10: 169-184.
- Telnov D. 1997. Anthicidae aus Nordvietnam (Insecta: Coleoptera). – *Mitteilungen des Internationalen Entomologischen Vereins e.V.* **22**, No. 1/2: 59-65.
- Telnov D. 1998. Anthicidae aus Nordvietnam II (Insecta: Coleoptera). – *Mitteilungen des Internationalen Entomologischen Vereins e.V.* **23**, No. 1/2: 85-93.
- Telnov D. 1999. Weitere Anthicidae verschiedener Regionen aus dem Zoologischen Museum Kopenhagen (Insecta Coleoptera). – *Bulletin de la Société royale belge d'Entomologie* **135**, No. 1/6: 72-81.
- Telnov D. 2001a. Zur Kenntnis asiatischer Anthicidae (Coleoptera), II. – *Entomologische Zeitschrift* **111**, No. 6: 182-186.
- Telnov D. 2001b. Zur Kenntnis asiatischer Anthicidae - III. – *Mitteilungen des Internationalen Entomologischen Vereins e.V.* **26**, No. 1/2: 21-33.
- Telnov D. 2005. A case of the mimicry in the Oriental Coleoptera Ischaliinae (Anthicidae), Lagriinae (Tenebrionidae), and Galerucinae (Chrysomelidae). – *Entomologische Zeitschrift* **115**, No. 4: 149-150.
- Telnov D. 2006a. Nomenclatural notes on Anthicidae and Pyrochroidae (Coleoptera). 1. – *Latvijas Entomologs* **43**: 57-77.
- Telnov D. 2006b. *Papuanthicus*, a new genus of Anthicini (Coleoptera: Anthicidae: Anthicinae) from New Guinea. – *Baltic Journal of Coleopterology* **6**, No. 1: 1-13.
- Telnov D. 2007a. Redefinition of *Pseudoleptaleus* Pic, 1900 (Coleoptera: Anthicidae, Anthicinae). – *Entomologische Zeitschrift* **117**, No. 2: 71-82.
- Telnov D. 2007b. A Review of the genus *Lemodes* Boheman, 1858 (Coleoptera: Anthicidae: Lemodinae). – *Veröffentlichungen des Naturkundemuseums Erfurt* **26**: 241-258.
- Telnov D. 2007c. Nomenclatural Notes on Anthicidae and Pyrochroidae (Coleoptera). 2. – *Latvijas entomologs* **44**: 31-44.
- Telnov D. 2011a. Tomoderinae (Coleoptera: Anthicidae) from the Indo-Australian transition zone (Wallacea) and adjacent areas. – *Vernate* **30**: 223-248.
- Telnov D. 2011b. Taxonomische Revision der Gattung *Macratria* Newman, 1838 (Coleoptera: Anthicidae: Macratriinae) aus Wallacea, Neuguinea und den Salomonen: 97-285, pls. 17-37. In: Telnov D. (ed.) *Biodiversity, Biogeography and Nature Conservation in Wallacea and New Guinea*. Rīga, the Entomological Society of Latvia: 434 pp. + 92 pls.
- Telnov D. 2012. New records and new species of Macratriinae from the Papuan region (Coleoptera: Anthicidae). – *Vernate* **31**: 429-468.
- Uhmann G. 1983. Anthiciden der orientalischen Region (Coleoptera, Anthicidae). – *Annales historico-naturales musei nationalis hungarici* **75**: 185-206.
- Uhmann G. 1990. Weitere Anthiciden verschiedener Regionen aus dem Museum in Genf (Coleoptera, Anthicidae). – *Revue suisse de Zoologie* **97**, No. 1: 139-151.
- Uhmann G. 1993. Anthiciden aus Sabah (Borneo) aus dem Naturhistorischen Museum in Genf (Coleoptera, Anthicidae). – *Revue suisse de Zoologie* **100**, No. 2: 373-404.
- Uhmann G. 1994. Südostasiatische Anthiciden aus dem Naturhistorischen Museum in Genf, 4 (Coleoptera, Anthicidae). – *Revue suisse de Zoologie* **101**, No. 3: 655-676.
- Uhmann G. 1995a. Anthicidae (Insecta: Coleoptera) from New Guinea in the Hornabrook Collection. – *Journal of the Royal Society of New Zealand* **25**, No. 4: 517-526.
- Uhmann G. 1995b. Weitere von Rudolf Schuh in Asien gefundene Anthiciden. – *Entomofauna* **16**, No. 20: 401-404.

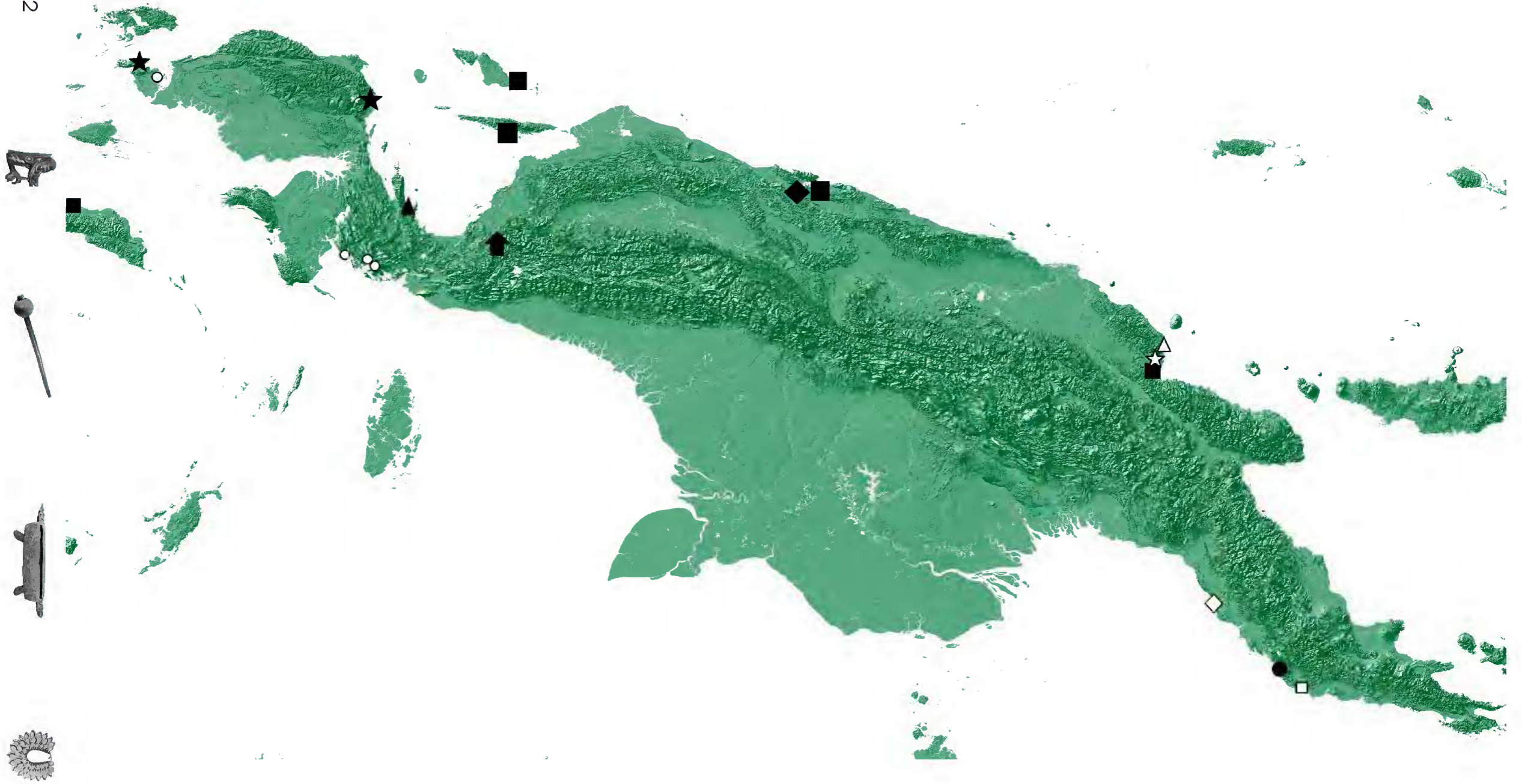


- Uhmann G. 2000. Anthicidae (Coleoptera) aus verschiedenen Regionen. – *Annales historico-naturales musei nationalis hungarici* **92**: 145-160.
- Uhmann G. 2007. Die Anthicidae Latreille 1819 (Coleoptera: Tenebrionoidea) von Australien ohne Formicomini. 68. Beitrag zur Kenntnis der Anthicidae. – *Coleoptera. Schwanfelder Coleopterologische Mitteilungen* **11**: 1-103.
- Werner F.G. 1962. A revision of the Nearctic species of *Sapintus* (Coleoptera: Anthicidae). – *Annals of the Entomological Society of America* **55**, No. 5: 492-498.
- Werner F.G. 1965. Anthicidae. In: *Insects of Micronesia. Coleoptera*. **16**, No. 5: 255-269.
- Werner F.G. 1967. A key to the Anthicidae of Hawaii, with one new species (Coleoptera). – *Proceedings of the Hawaiian Entomological Society* **19**, No. 2 (1966): 310-316.
- Werner F.G. 1983. Neotropical *Sapintus*, with a general key to species (Coleoptera: Anthicidae). – *Proceedings of the Entomological Society of Washington* **85**, No. 3: 405-425.
- Werner F.G., Chandler D.S. 1995. *Anthicidae (Insecta: Coleoptera)*. *Fauna of New Zealand* 34. Lincoln, Canterbury, Manaaki Whenua Press: 64 pp.
- Young D.K. 1984. Field records and observations of insects associated with cantharidin. – *The Great Lakes Entomologist* **17**, No. 4: 195-199.



Map 2. Distribution of *Sapintus* species on Bismarck Archipelago. Filled circle – *S. dyaulensis* nom. nov. & *S. insularis* (Werner, 1965); filled triangle – *S. dilensis* (Pic, 1900) (prepared with Arc View 9.0).





Map 3. Distribution of *Sapintus* species on New Guinea. Filled circle – *S. alfurus* (Pic, 1900); circle – *S. celeripes* sp. nov.; filled triangle – *S. densepunctatus* sp. nov.; triangle – *S. geminus* sp. nov.; filled square – *S. horvathi* (Pic, 1902); square – *S. hirtipennis* (Pic, 1900), *S. loriae* (Pic, 1900), *S. papuus* (Pic, 1900) & *S. quadrinotatus* (Pic, 1900); filled rhomb – *S. javanus* (Marseul, 1882a); rhomb – *S. insulanus* (Pic, 1900); star – *S. madangensis* Uhmman, 1995; filled star – *S. sexualis* sp. nov.; filled arrow – *S. macrops* sp. nov. (prepared with Arc View 9.0).



Map 4. Distribution of *Sapintus* species on the Moluccas and Raja Ampat. Filled circle – *S. dilensis* (Pic, 1900); circle – *S. malut* sp. nov.; filled square – *S. horvathi* (Pic, 1902); square – *S. celeripes* sp. nov. & *S. oceanicus* (LaF., 1849a) (prepared with Arc View 9.0).





Map 5. Distribution of *Sapintus* species on Sulawesi. Filled circle – *S. gemitus* sp. nov.; circle – *S. monstrosiantennatus* sp. nov. & *S. malayensis* (Pic, 1895); filled square – *S. malayensis* (Pic, 1895) (prepared with Arc View 9.0).

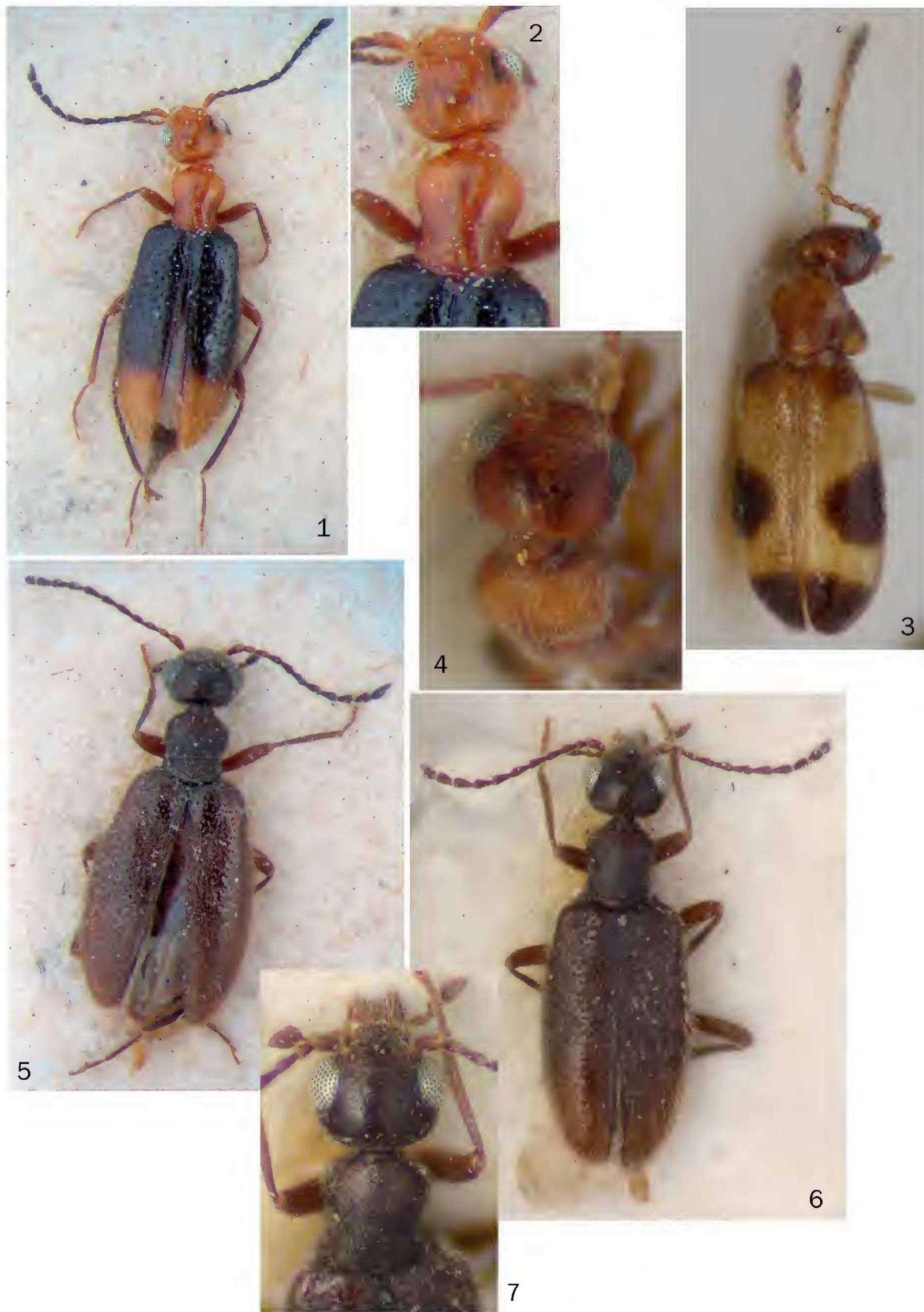


Map 6. Distribution of *Sapintus* species on Solomon Islands. Circles (both filled & empty) – *S. airi* sp. nov.; empty circle – *S. curvitibia* sp. nov.; triangle – *S. oceanicus* (LaF., 1849a) (prepared with Arc View 9.0).



Plate 44

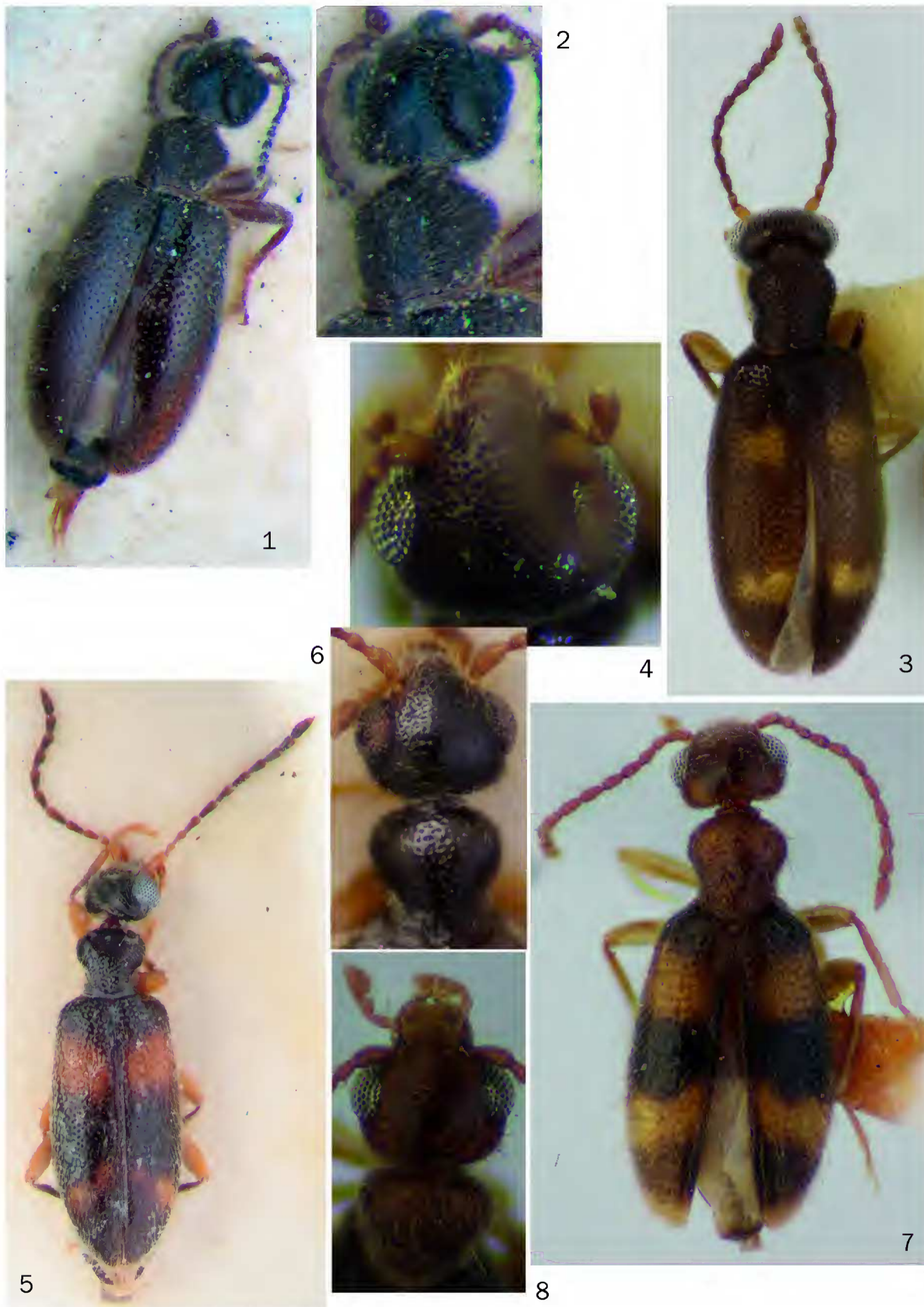
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Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-2 – *S. adonis* (Pic, 1900), holotype ♀; 3-4 – *S. airi* sp. nov., paratype ♀; 5-7 – *S. albertisi* (Pic, 1900). 5 – Lectotype ♀; 6-7 – Paralectotype ♀.

Plate 45

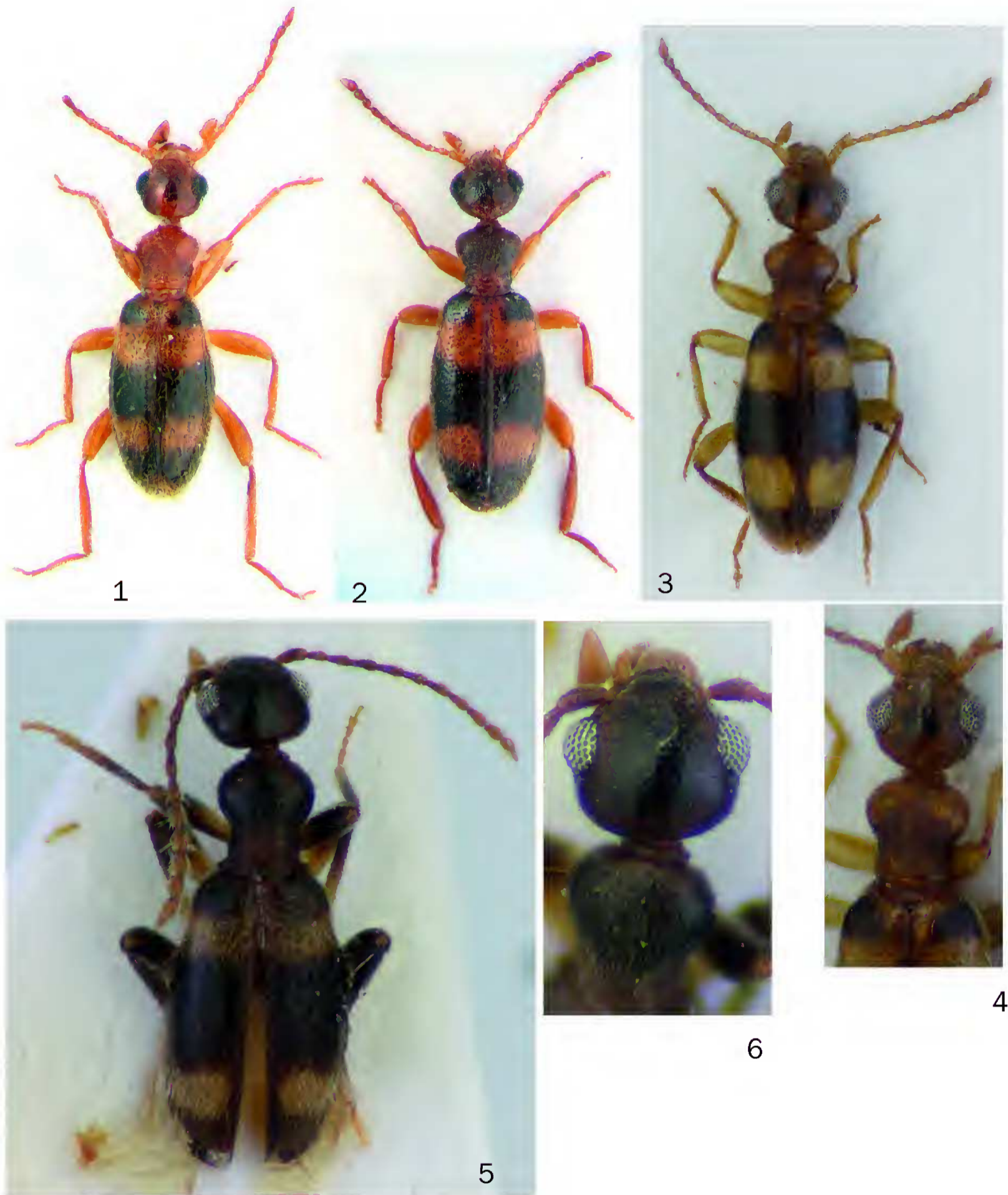
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-8. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-2 - *S. alfurus* (Pic, 1900), lectotype ♂; 3-4 - *S. carolinensis* (Werner, 1965), paratype from Kusaie Island; 5-6 - *S. curvitibia* sp. nov., paratype ♂; 7-8 - *S. dybasi* (Werner, 1965), paratype ♂ from Koror Island.

Plate 46

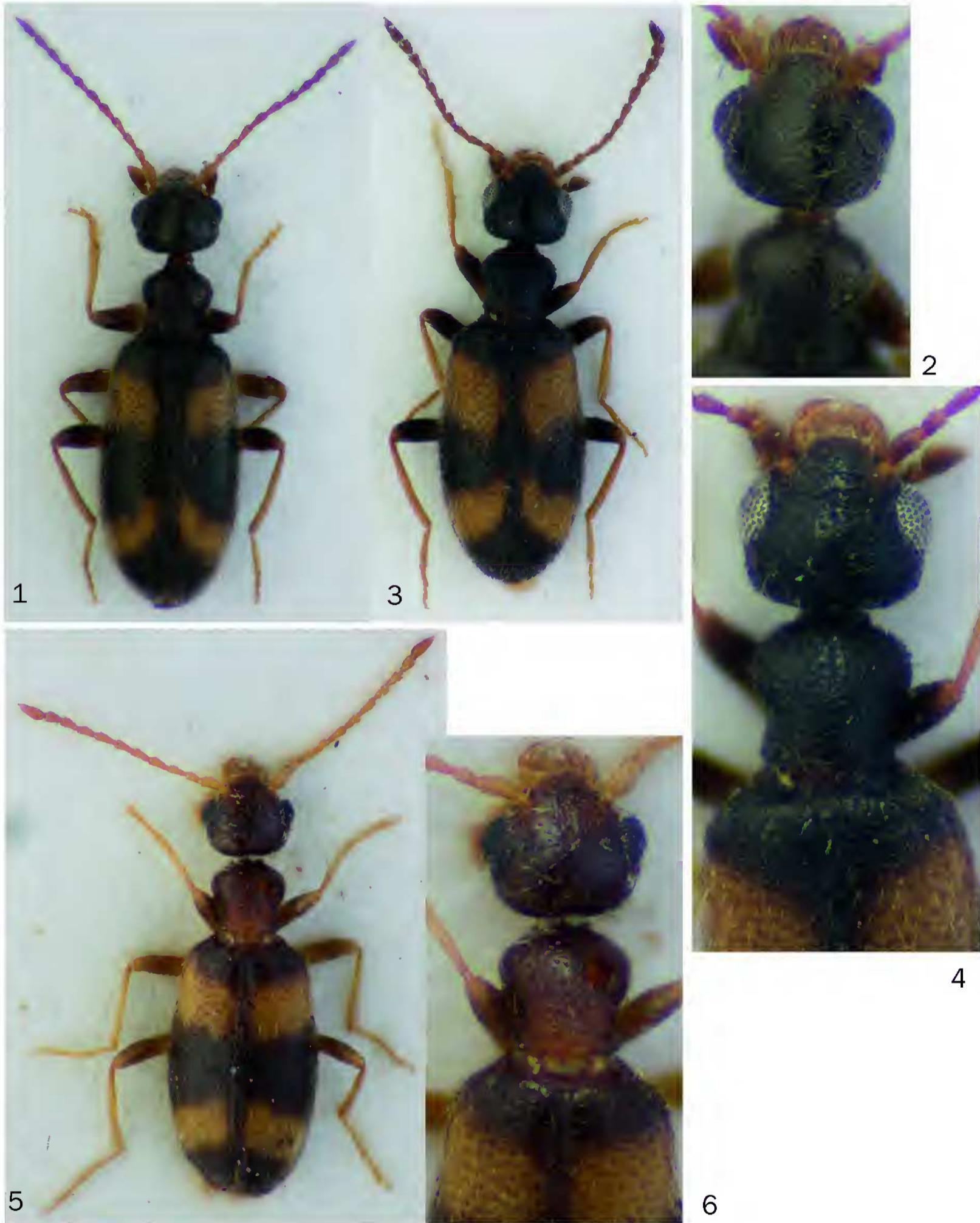
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-6. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-4 – *S. celeripes* sp. nov. 1-2 – Paratype ♂; 3-4 – Paratype ♀; 5-6 – *S. geminus* sp. nov., holotype ♂.

Plate 47

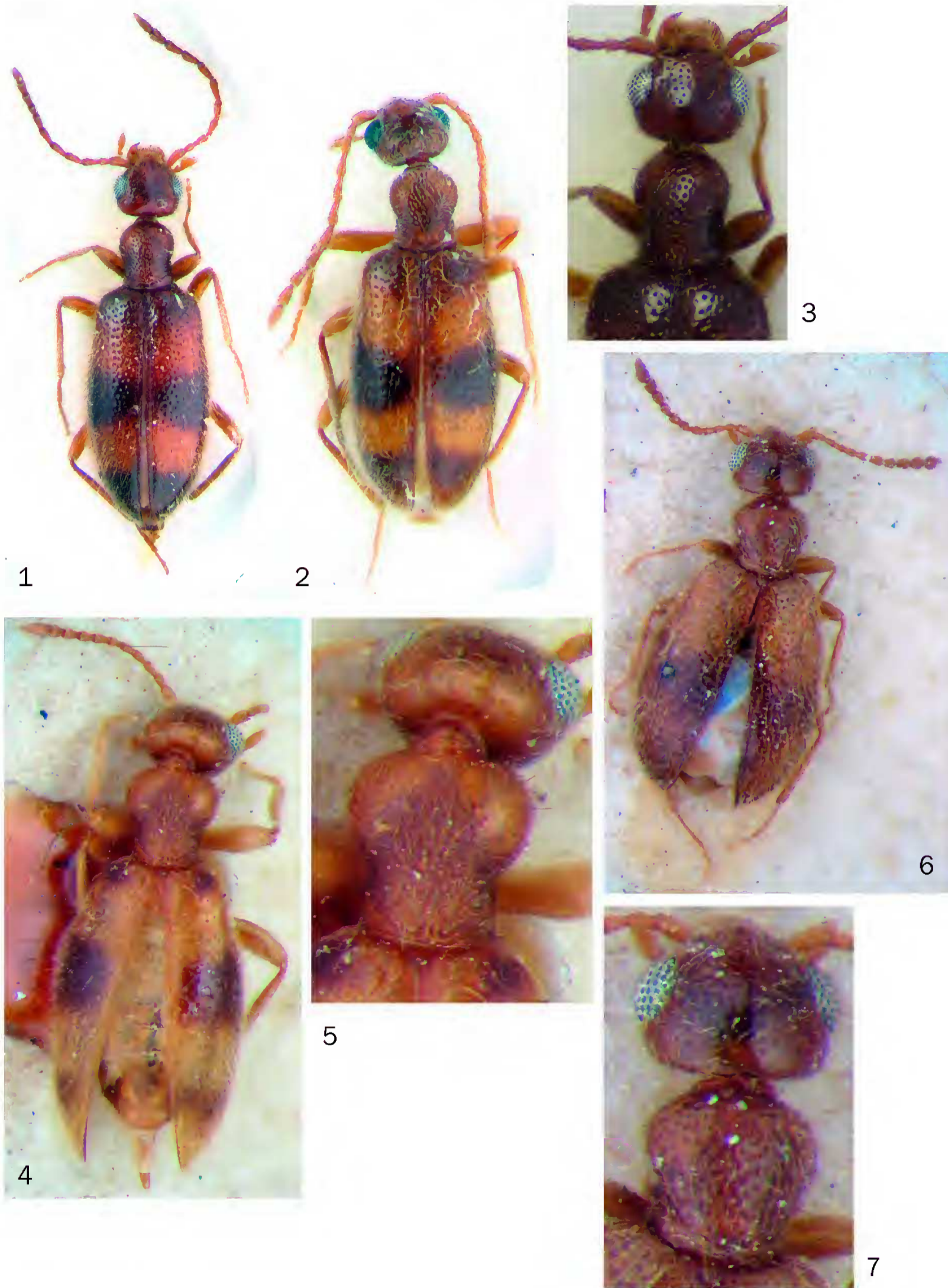
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-6. *Sapintus dilensis* (Pic, 1900), habitus and head / forebody, dorsal view. 1-2 - ♂ from Waigeo Island; 3-4 - ♂ from Triton Bay, Bird's Neck isthmus, Indonesian New Guinea; 5-6 - ♂ from Morobe environs, E Papua New Guinea.

Plate 48

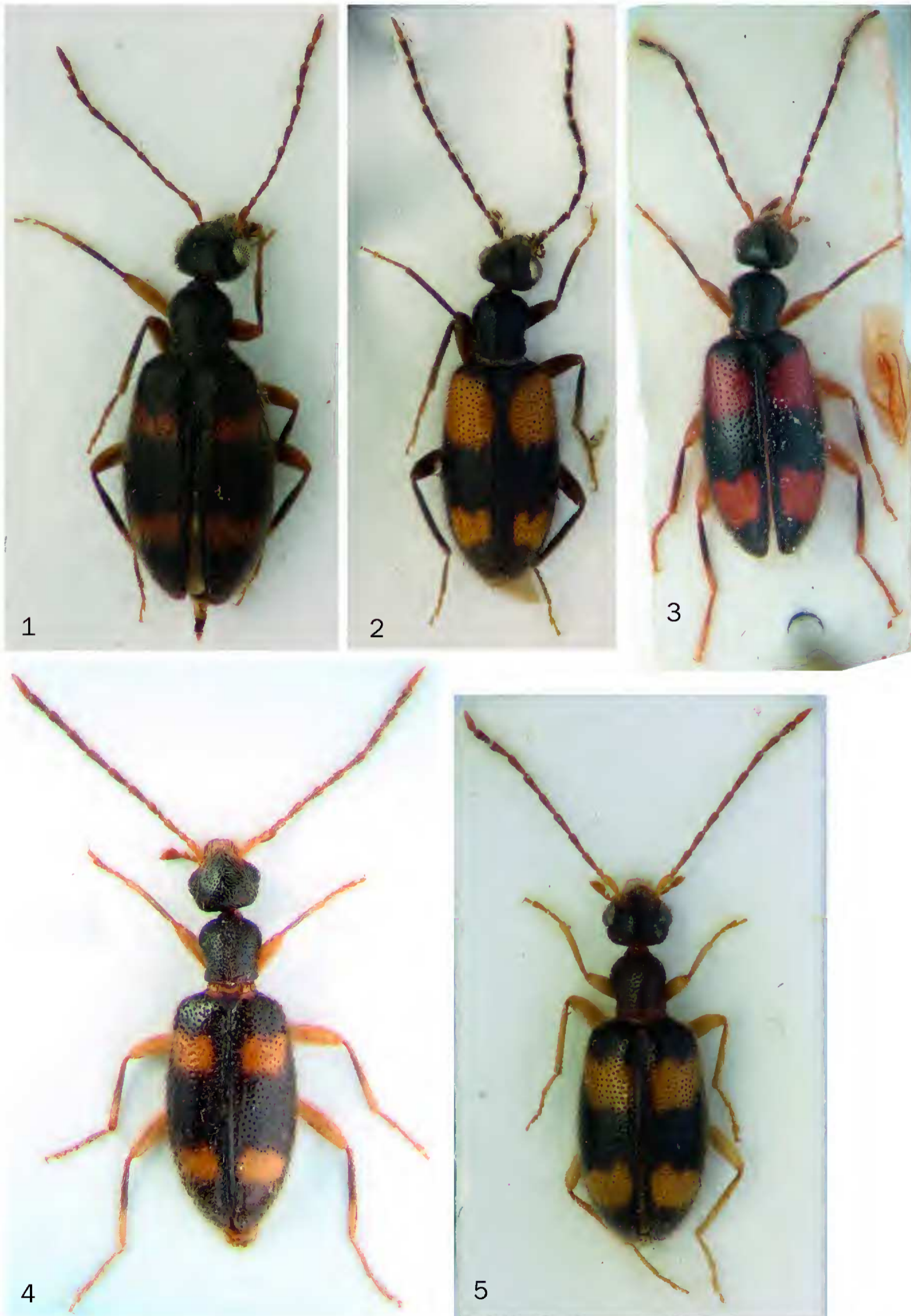
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-3 – *S. gemitus* sp. nov. 1 – Holotype ♂; 2-3 – Paratype ♂; 4-5 – *S. insulanus* (Pic, 1900), lectotype ♀; 6-7 – *S. hirtipennis* (Pic, 1900), holotype ♀.

Plate 49

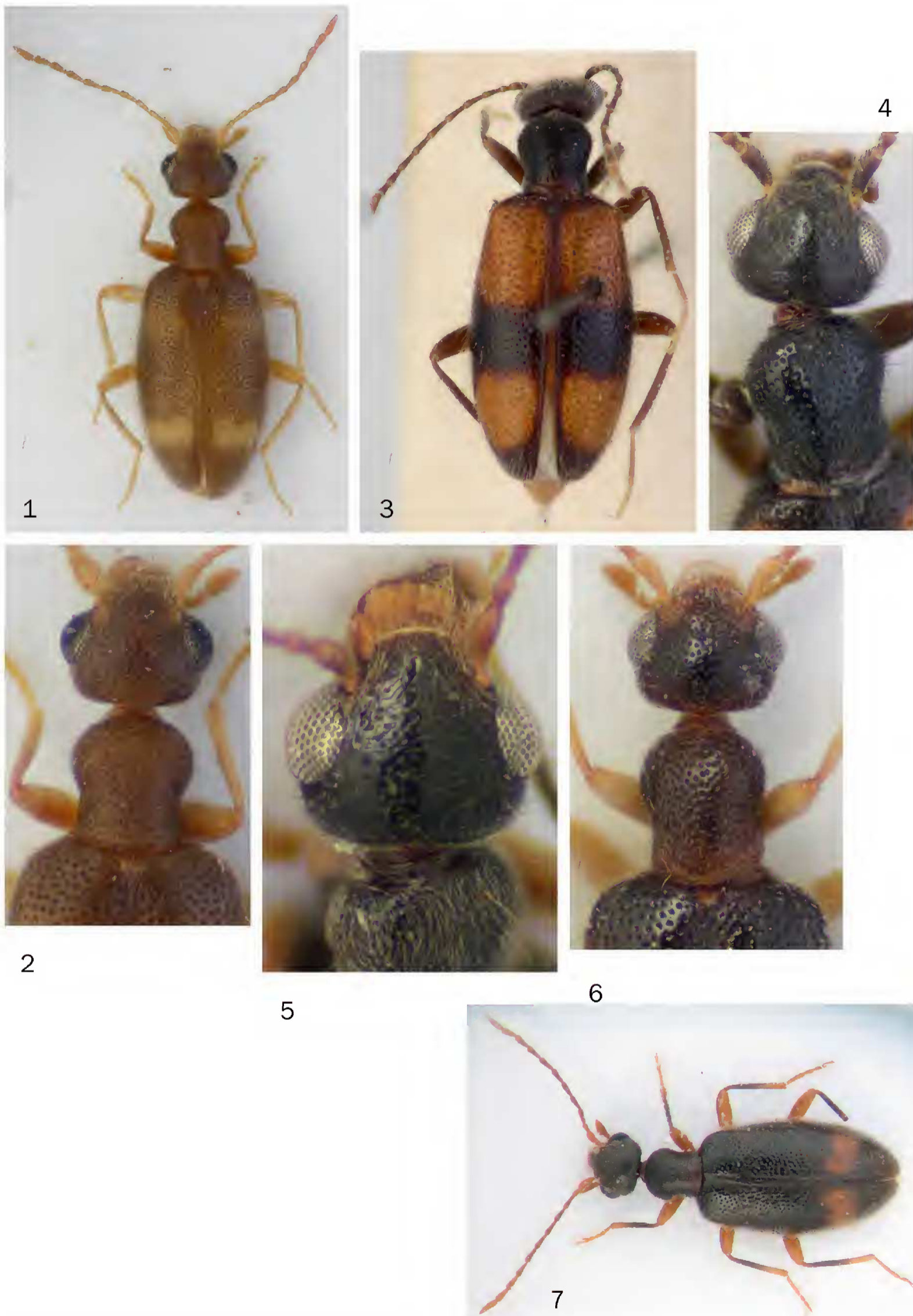
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-5. *Sapintus gracilicornis* (Pic, 1895), habitus, dorsal view. 1 - ♀ from Indonesian Kalimantan; 2 - ♂ from Nabire environs, Indonesian New Guinea; 3 - ♂ from Genyem, Indonesian New Guinea; 4 - ♂ from Somyangga environs, Indonesian New Guinea; 5 - ♀ from Palu environs, Central Sulawesi.

Plate 50

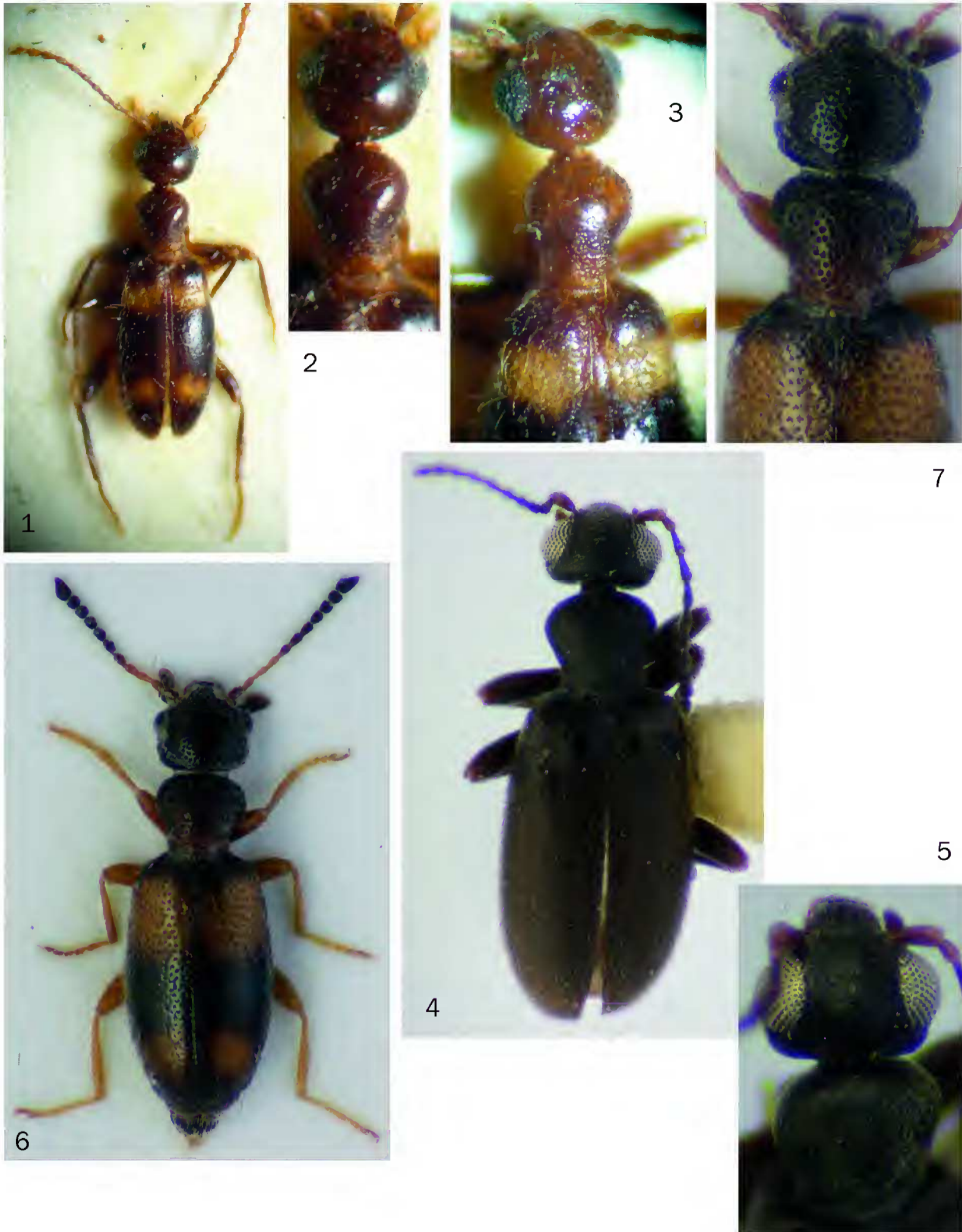
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. *Sapintus gracilicornis* (Pic, 1895), habitus, head / forebody, dorsal view. 1-2 - ♀ from Seram Island; 3 - ♀ from Malu environs, W Papua New Guinea; 4 - ♂ from Nabire environs, Indonesian New Guinea; 5 - ♀ from Indonesian Kalimantan; 6 - ♀ from Palu environs, Central Sulawesi; 7 - ♀ from Central Halmahera.

Plate 51

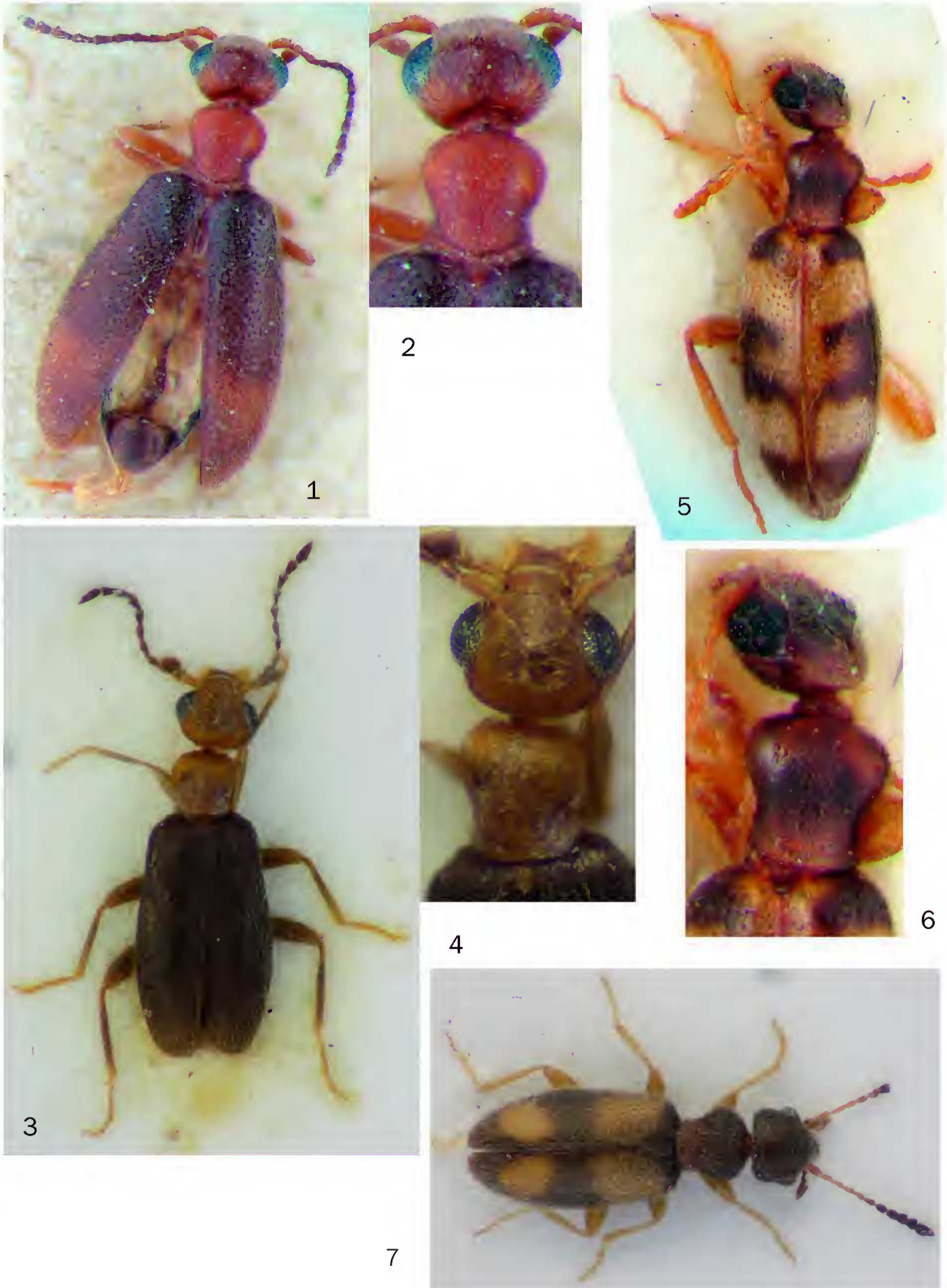
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody. 1-3 – *S. horvathi* (Pic, 1902). 1-2 – Holotype ♂; 3 – Paratype ♂; 4-5 – *S. insularis* (Werner, 1965), paratype ♂; 6-7 – *S. javanus* (Marseul, 1882a), ♂ from Jayapura environs, Indonesian New Guinea.

Plate 52

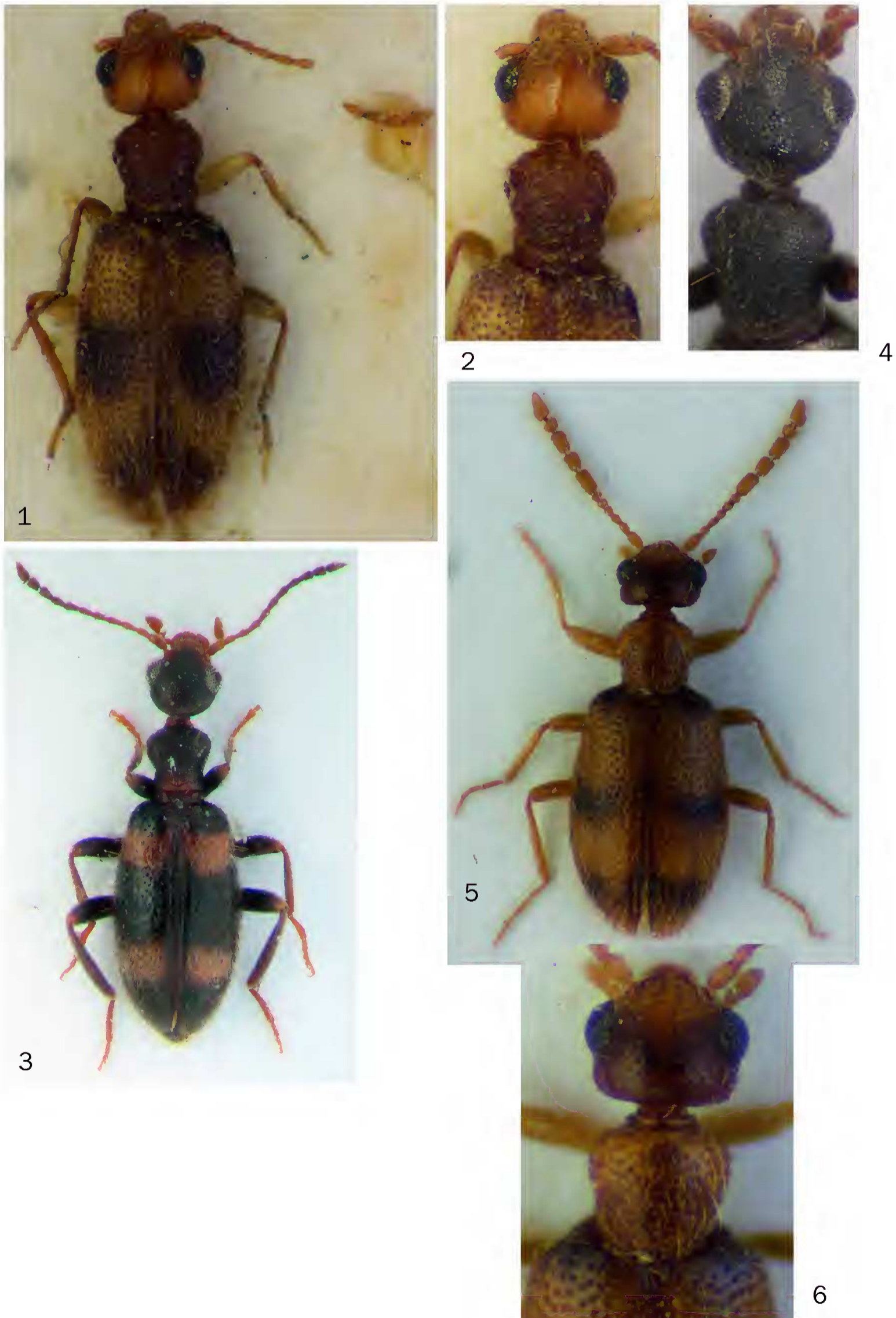
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-2 - *S. loriae* (Pic, 1900), lectotype ♀; 3-4 - *S. macrops* sp. nov., paratype ♀; 5-6 - *S. madangensis* Uhmann, 1995, holotype ♂; 7 - *S. hartmanni* sp. nov., holotype ♂.

Plate 53

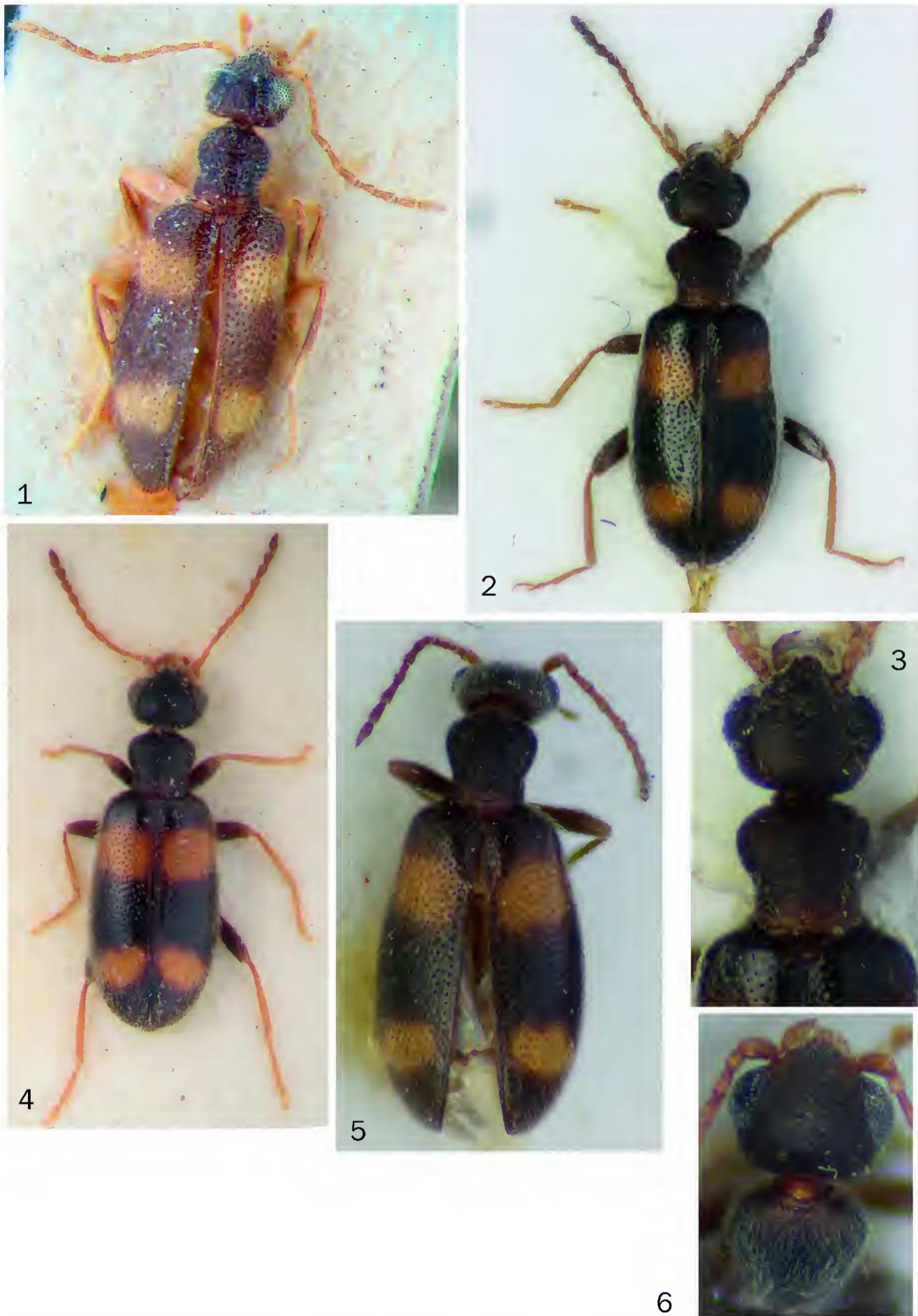
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-6. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-2 – *S. malayensis* (Pic, 1895), ♀ from Sumbawa island; 3-4 – *S. malut* sp. nov., paratype ♀; 5-6 – *S. monstrosiantennatus* sp. nov., holotype ♂.

Plate 54

TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-6. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1 - *S. gracilicornis* (Pic, 1895) (holotype ♀ *Anthicus neoguineensis* Pic, 1900); 2-6 - *S. oceanicus* (LaFerté-Sénectère, 1849a). 2-3 - ♀ from Salawati Island; 5-6 - ♂ from Vanuatu.

Plate 55

TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-3 - *S. papuus* (Pic, 1900). 1 - Lectotype ♀; 2-3 - Paralectotype ♂; 4-5 - *S. insularis* (Werner, 1965) (holotype ♂ *S. placitus* Bonadona, 1981); 6-7 - *S. dilensis* (Pic, 1900) (holotype ♂ *S. relatus* Bonadona, 1981).

Plate 56

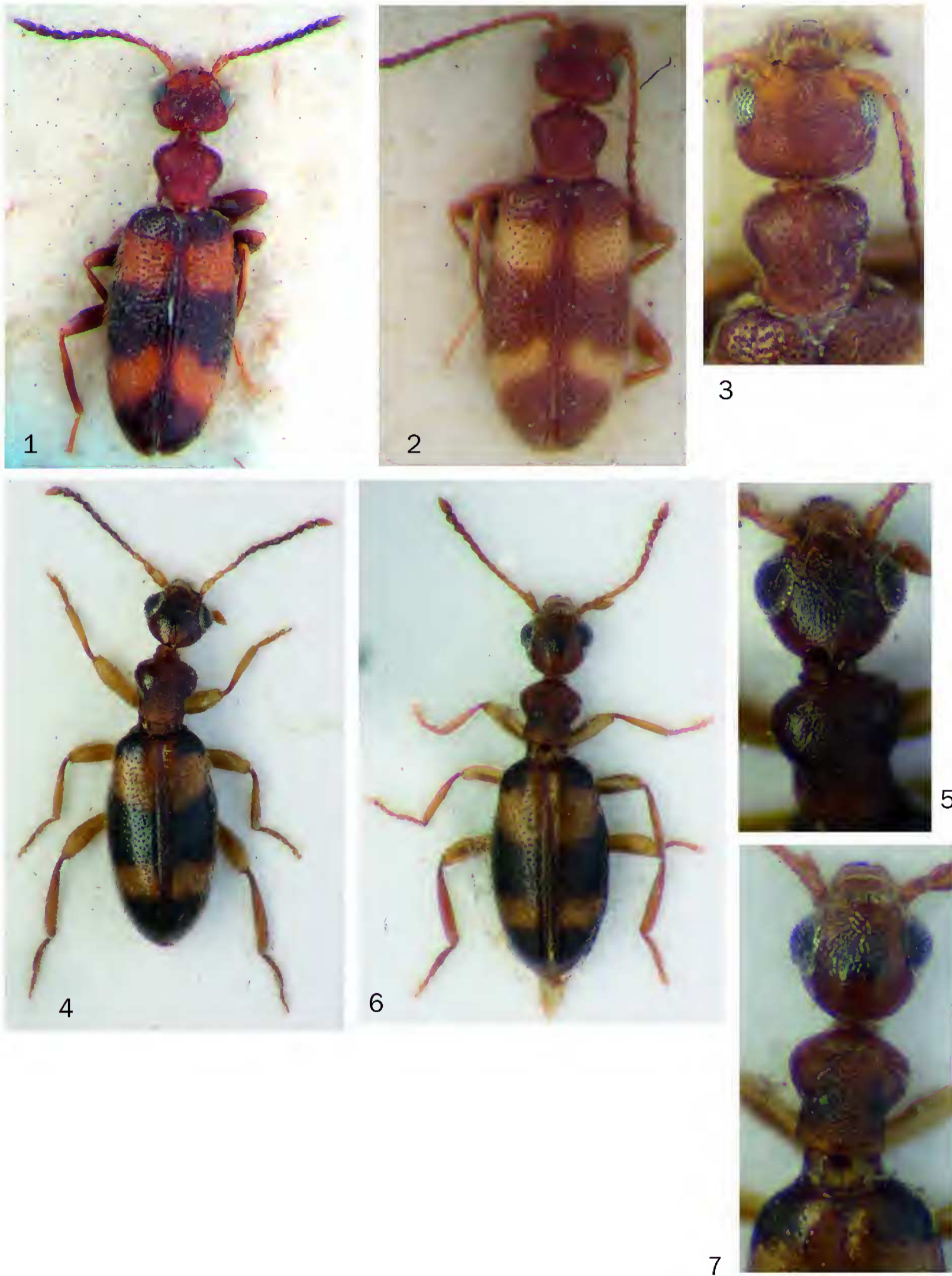
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-8. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-2 – *S. quadrinotatus* (Pic, 1900), holotype ♂; 3-4 – *S. rugosicollis* (Pic, 1900), lectotype ♀; 5-6 – *S. gracilicornis* (Pic, 1895) (lectotype ♀ *Anthicus gracilicornis* var. *semiobliteratus* Pic, 1900); 7-8 – *S. plectilis* (Pic, 1910), ♂ from Shanghai, China.

Plate 57

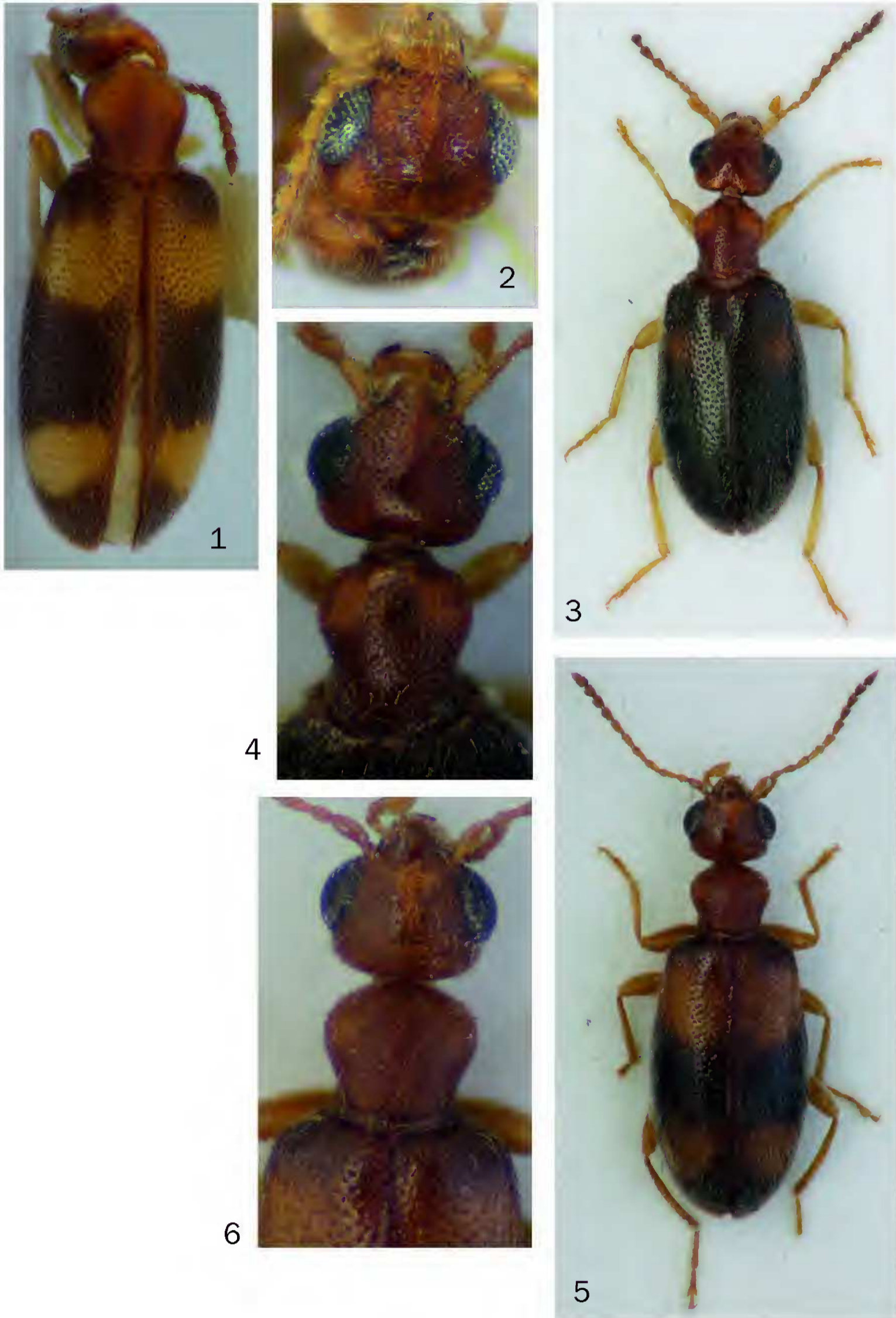
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian *Sapintus*, habitus and head / forebody, dorsal view. 1-3 - *S. semirugosus* (Pic, 1902). 1 - Holotype ♂; 2-3 - ♂ from Stephansort, E Papua New Guinea; 4-7 - *S. sexualis* sp. nov. 4-5 - Paratype ♂; 6-7 - Paratype ♀.

Plate 58

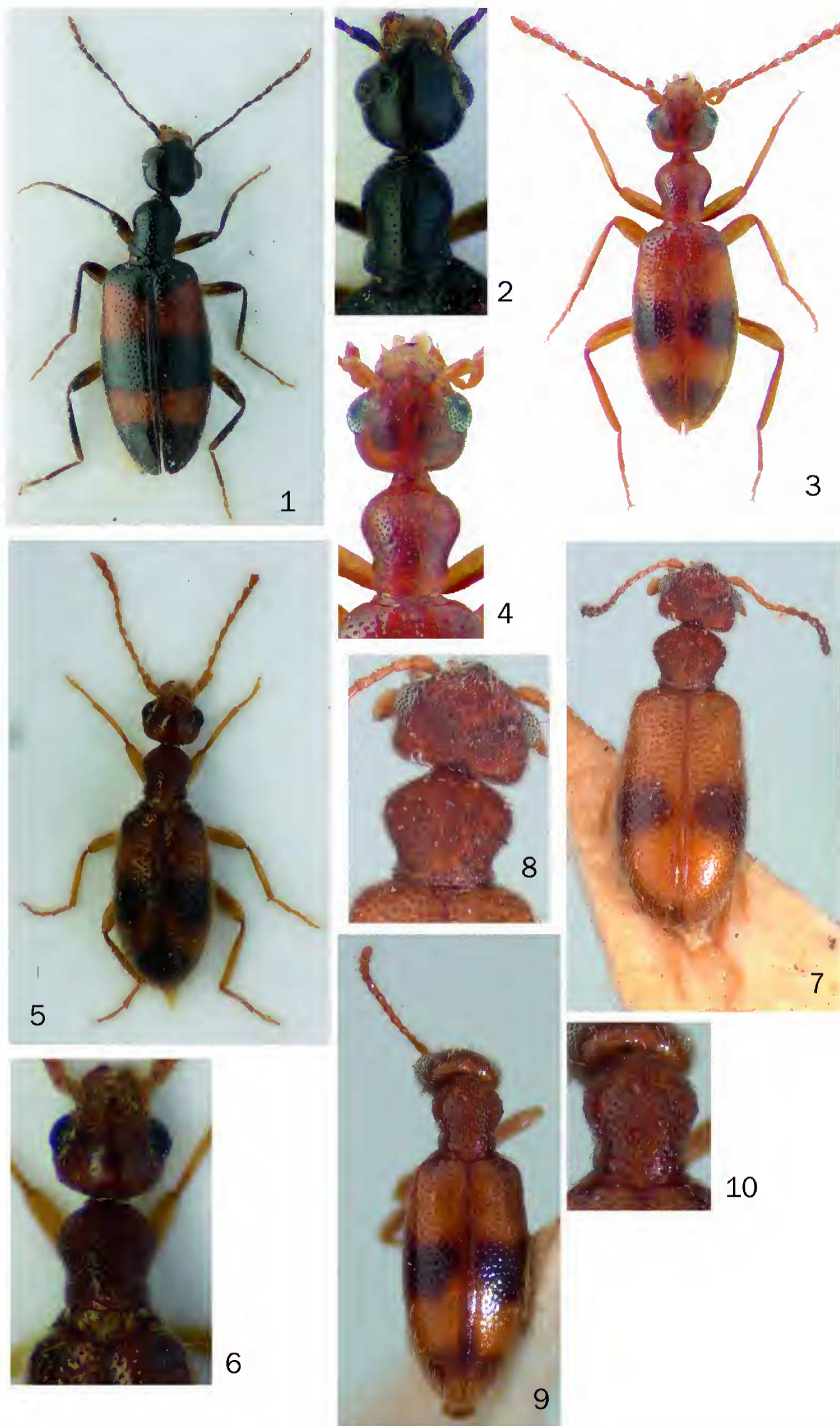
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-6. *S. vexator* (Werner, 1965), habitus and head / forebody, dorsal view. 1-2 - Paratype ♂ from Gilbert Island; 3-4 - ♂ from Khao Lak environs, S Thailand; 5-6 - ♂ from Kualo, Central Vietnam.

Plate 59

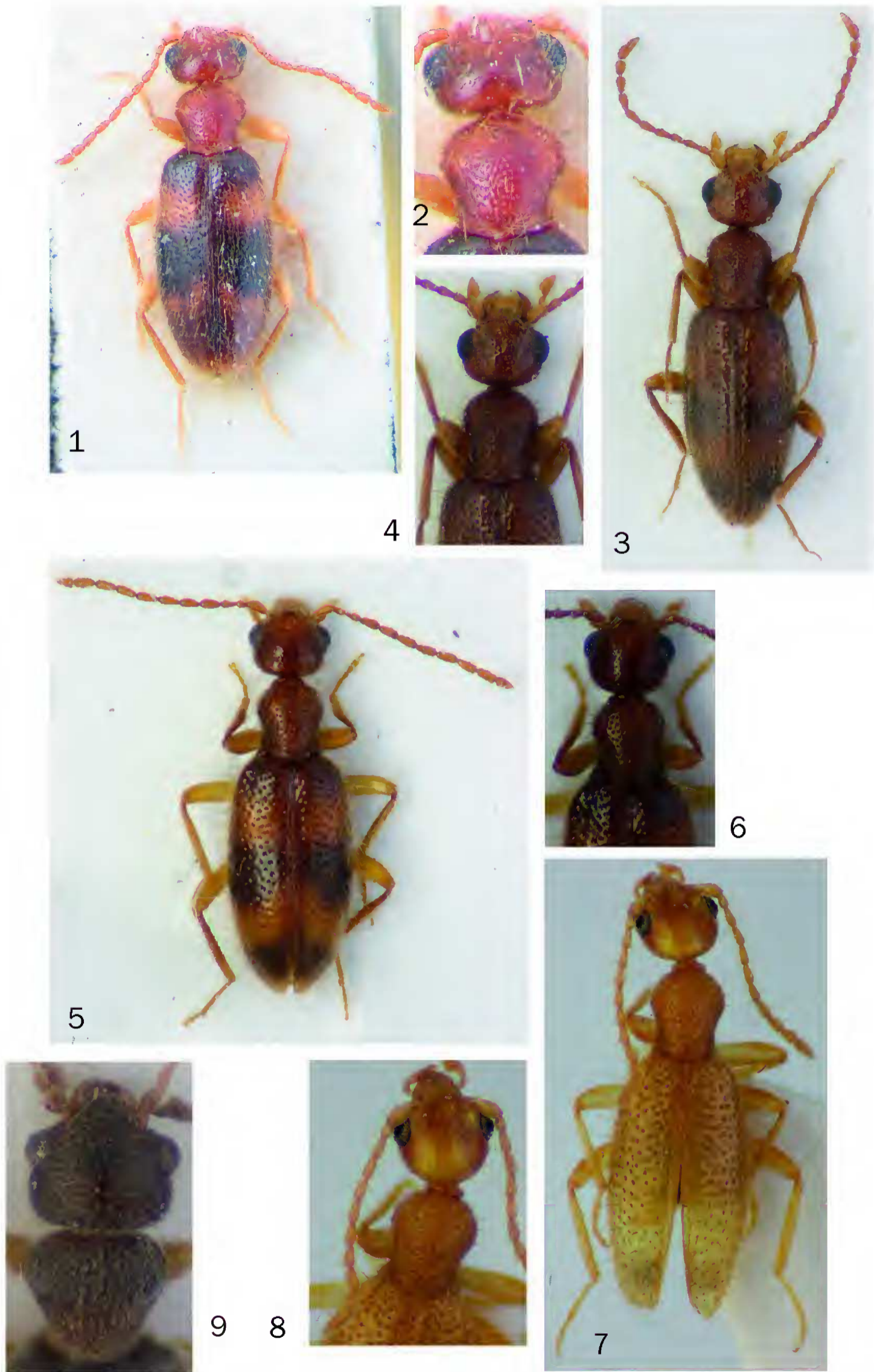
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-10. Oriental *Sapintus*, habitus and head / forebody, dorsal view. 1-2 – *S. andreaskopetzi* sp. nov., holotype ♀; 3-4 – *S. angulapex* sp. nov., holotype ♀; 5-6 – *S. anguliceps* (LaFerté-Sénectère, 1849a), ♀ from Khao Lak environs, S Thailand; 7-8 – *S. bataviensis* (Marseul, 1882a), syntype; 9-10 – *S. bizonellus* (Marseul, 1882a), syntype.

Plate 60

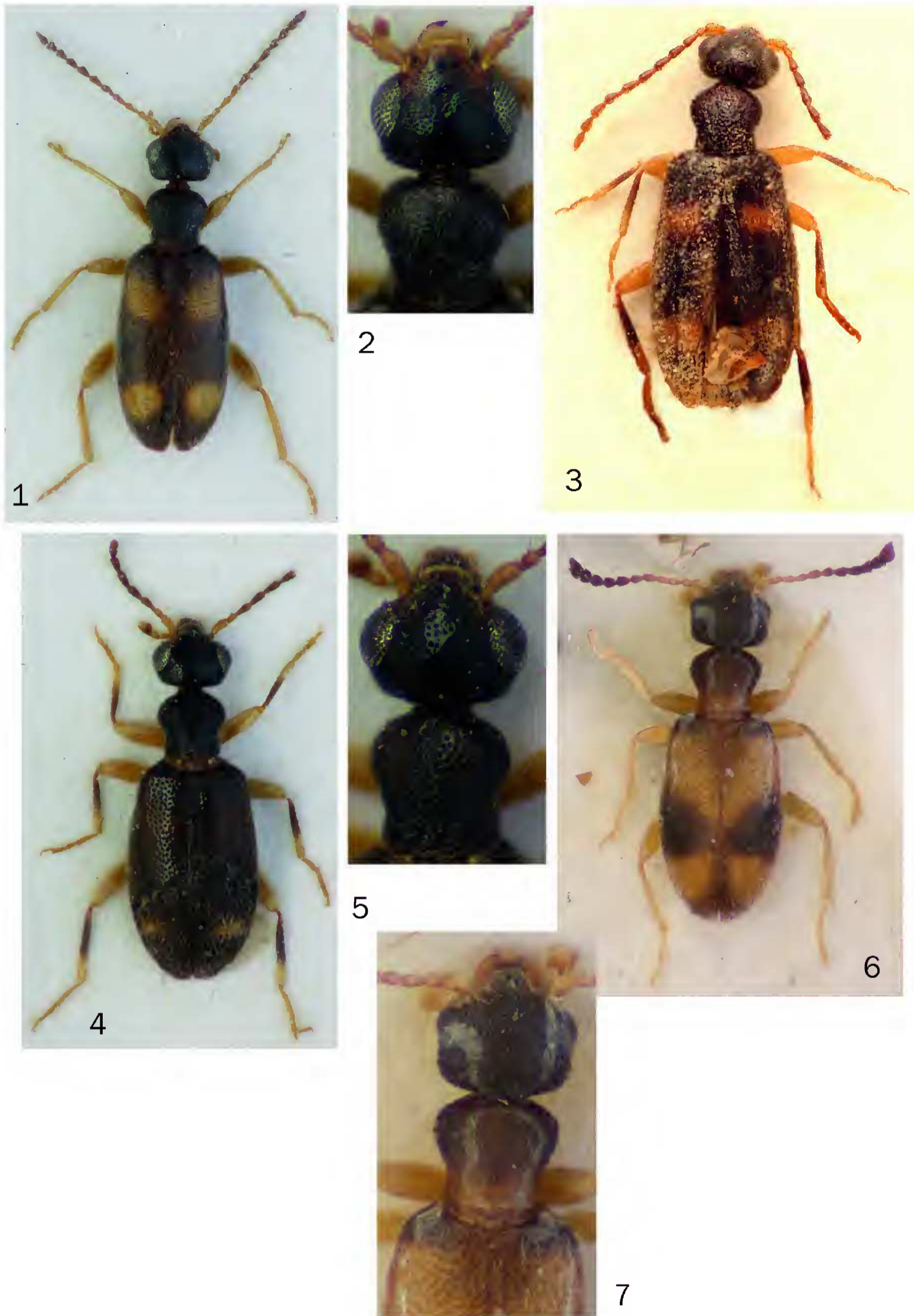
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-9. Oriental *Sapintus*, habitus and head / forebody, dorsal view. 1-2 - *S. botanicus* (Pic, 1952), holotype; 3-4 - *S. curvatus* sp. nov., holotype ♂; 5-6 - *S. echinatus* sp. nov., holotype ♂; 7-8 - *S. gracilentus* sp. nov., paratype ♀; 9 - *S. hartmanni* sp. nov., holotype ♂.

Plate 61

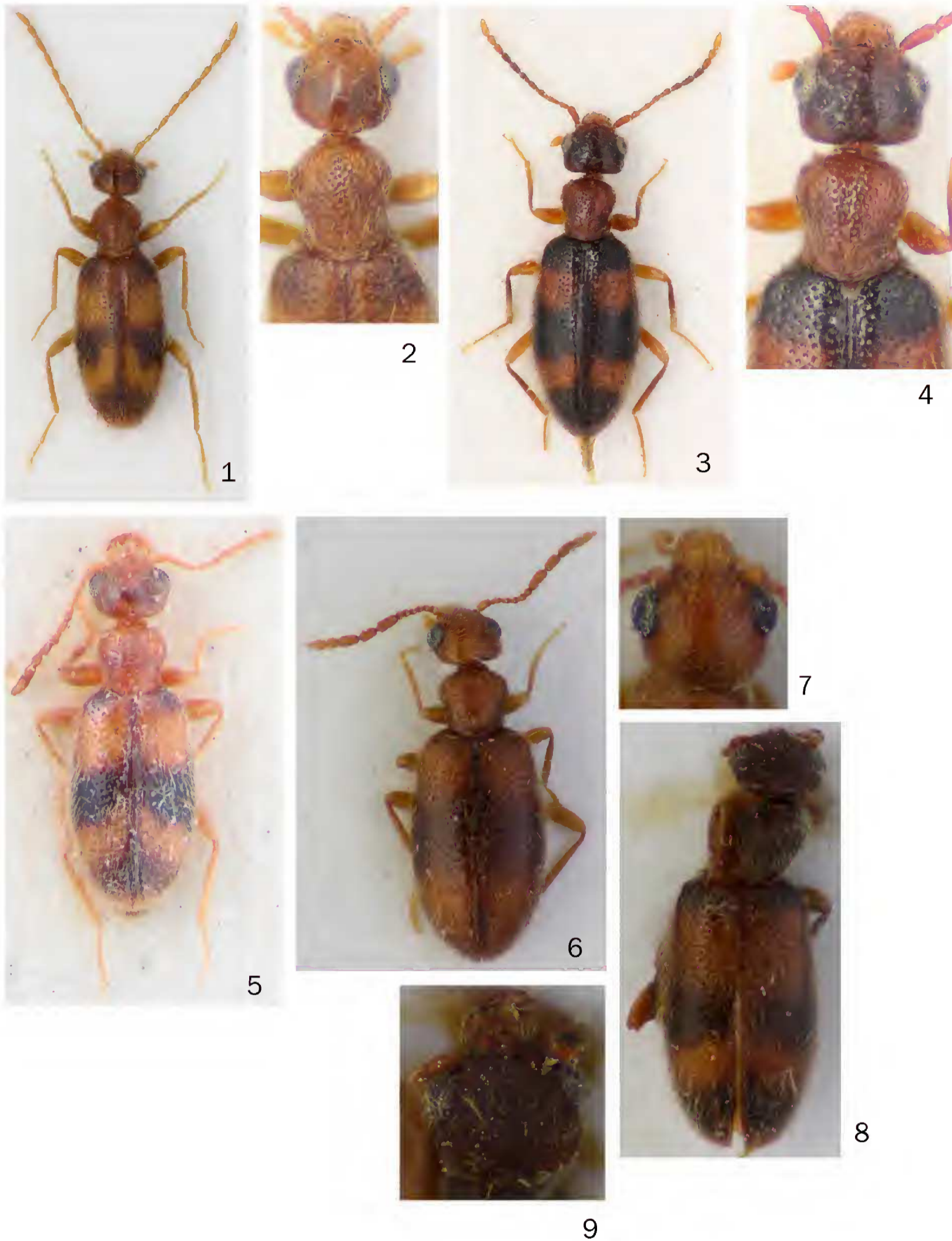
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-7. Indo-Australian and Oriental *Sapintus*, habitus and head / forebody, dorsal view. 1-2 - *S. densepunctatus* sp. nov., holotype ♂; 3-5 - *S. dyaulensis* nom. nov. 3 - holotype ♂ *S. propinquus* Bonadona, 1981; 4-5 - ♂ from Nabire environs, Indonesian New Guinea); 6-7 - *S. flavonotatus* (Pic, 1908), ♂ from Angkor Thom, Cambodia.

Plate 62

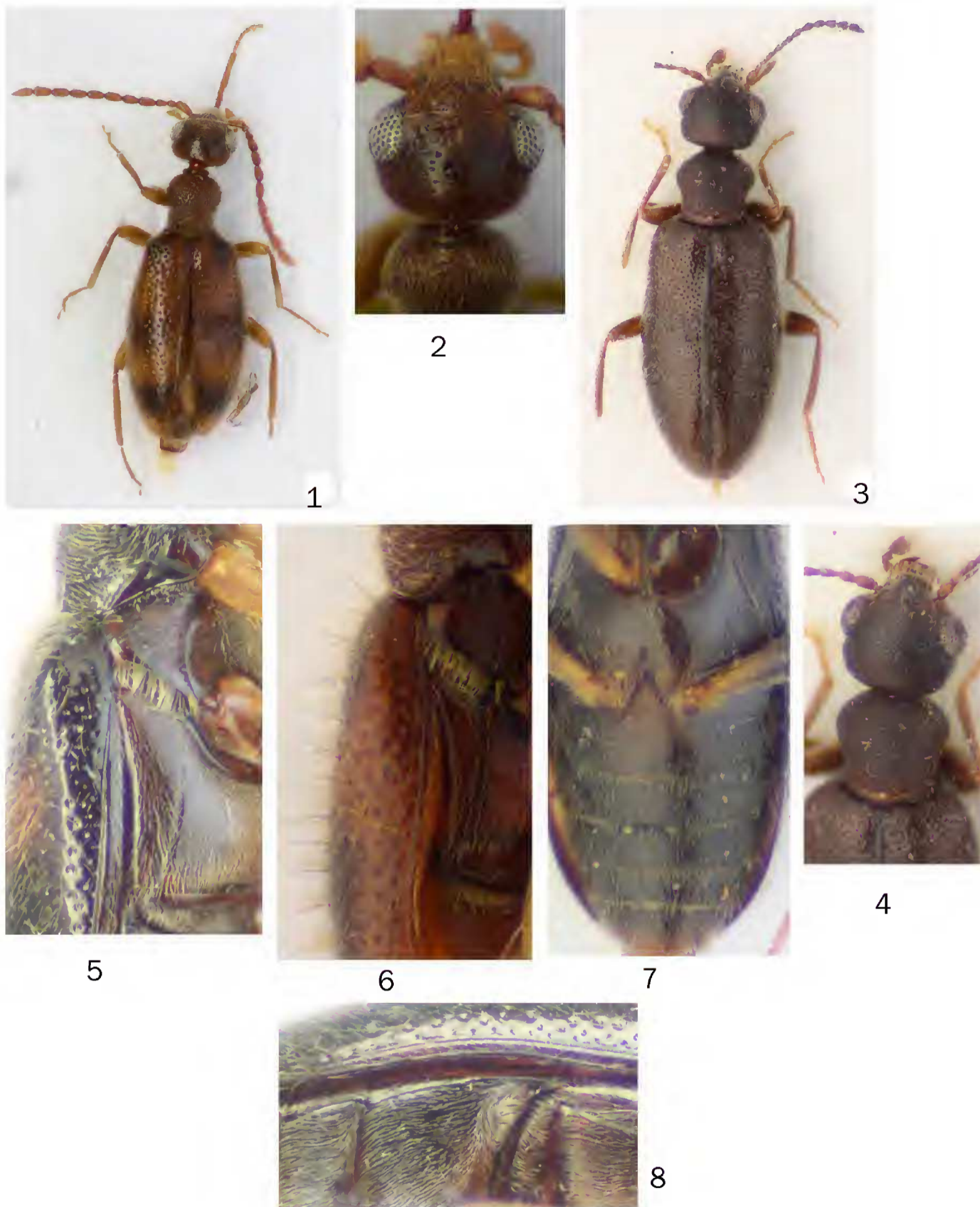
TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-9. Oriental *Sapintus*, habitus and head / forebody, dorsal view. 1-2 - *S. lao* sp. nov., paratype ♂; 3-4 - *S. marseuli* (Pic, 1892), ♀ from N Vietnam; 5 - *S. pilipennis* (Pic, 1952), holotype; 6-7 - *S. pollocki* Uhmman, 1999, ♂ from Queensland; 8-9 - *S. subopaciceps* (Pic, 1913), ♂ from Indonesian Kalimantan.

Plate 63

TELNOV, D.: Taxonomic revision of the genus *Sapintus* Casey, 1895 (Coleoptera: Anthicidae: Anthicinae) ...



Figures 1-8. Oriental and Indo-Australian *Sapintus*, habitus and head / forebody (dorsal view), abdomen (ventral & lateral view), meso- and metasternum (lateral view). 1-2 – *S. testaceicolor* (Pic, 1913), ♂ from Hong Kong; 3-4 – *S. vietnamensis* sp. nov., paratype ♂; 5 – *S. gracilicornis* (Pic, 1895), ♂ from Sabah, East Malaysia; 6 – *S. echinatus* sp. nov., paratype ♂; 7 – *S. dilensis* (Pic, 1900), ♂ from Waigeo Island; 8 – *S. gracilicornis* (Pic, 1895), ♂ from Sabah, East Malaysia.